MAN IN INDIA

VOL. 37 { JULY-SEPT. 1957 { NO. 3

ANTHROPOLOGY AND TRIBAL WELFARE[1]

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(*Received on 2nd May, 1957*)

Anthropology, Not a Science of Curiosities

ANTHROPOLOGY is often wrongly looked upon as a science dealing with curiosities. Unfortunately, anthropologists themselves have occasionally been responsible for creating such misunderstanding ; and it is time that in India, where a vast amount of useful and socially significant work can be done, one must make a special endeavour not to allow the science from being mis-shapen either by the spirit of curio-hunting or by an unbalanced, romantic concern for the hitherto neglected tribes inhabiting our land.

Even if it is agreed for the time being that the chief concern of a social anthropologist should be with the non-literate inhabitants of India, living in her jungles and hills, particularly those whose spoken language belongs to a family different from the language used by the literate Hindu or Muslim inhabitants of the neighbouring plains, it is necessary to exercise great caution when we try to present a picture of the actual, existing state of affairs among such people. As Professor D. N. Majumdar of the Lucknow University has ably

[1]Presidential Address in the Anthropology Section of the Fourth Tribal Welfare Conference, Koraput, Orissa ,30th April, 1957.

said, all tribes in India are in transition. Just as in the case of language where no sharp geographical line can be drawn, but where the transition from one dialect to another can best be represented, not by a line, but by colours which fade into one another, so also in the case of tribal cultures, it is hard to say when a culture ceases to be 'tribal' and when it has to be considered Hindu, in the usually accepted sense of that term in India. What may be true of the Jarawas of the Andamans, who live in real, and very nearly complete economic isolation, is certainly untrue of the tribes who live in the more sequestered portions of our vast sub-continent.

When anthropologists are confronted by the task of describing the culture of any tribe, which undoubtedly in India will be in a state of transition, he is unfortunately tempted to pick out those elements of culture which are not shared by them in common with their Hindu neighbours, and say that the latter constitute the *true* culture of the tribe in question. When this intellectual process of selection is made, one should not forget that extremeness of contrast need not necessarily reach us nearest the point of truth. The actual situation in which culture elements of different orders are mixed with one another in different proportions, both in the sense of geography as well as in respect of sections or classes of a population, may give us a more correct representation of reality than the process of selection and unconscious exaggeration which has been referred to above.

Let us take a specific example. The Birhors of Chotanagpur, who are known as the Makarakhiya Kulha in northern Orissa, and the Kharias of Mayurbhanj live in partial dependence on the forests. They gather some edibles from the jungle, whether from the vegetable or animal kingdom : but what is of greater significance is that they have certain industries like the manufacture of ropes from jungle creepers, or the collection of honey, wax and so on from the forests which are exchanged with the products of farmers or artisans living in the neighbouring non-tribal villages. An enquiry into their recently past history has tended to show that their present extreme dependence on the forests is not a 'survival' from the past,

in the Tylorean sense, but is a new adaptation to nature, and to the presence of comparatively prosperous farming communities near by. To paint the Birhors of to-day as representative of a by-gone culture, and to state that their ties with the jungle as observed to-day are the *real* elements of Birhor culture is perhaps to misrepresent Birhor life and culture, maybe in an unconscious manner. Even from the point of view of the strict dictates of science, one should have been warned by the fact that careful observers like Sarat Chandra Roy failed to notice any specific religious ceremonies or rituals connected with rope-making or the gathering of honey or edibles of other kinds among the Birhors and Kharias, for it is well known that the long-established economic activities of non-literate peoples in India often tend to gather a ritual significance.

The danger stemming from selective sympathy is no less than the danger which arises out of hatred for those who have so long exploited the tribal people.

Some time ago, one of India's leading anthropologists[2] pointed out the fact that the introduction of wet cultivation among a people like the Abors, who practise j h u m or shifting cultivation, led to certain undesirable results. Among these people, women play a special part in connection with the j h u m fields ; while their partial dependence on hunting and fishing in the hill streams, also leads to an enrichment of the diet by the inclusion of proteins. Wet cultivation leads to an extreme dependence on carbohydrates, and consequent nutritional deficiency, while the position of the women also suffers on account of the same change.

It was also stated on the basis of 'a careful survey made by the Department of Anthropology, Government of India' that nutritional deficiency led to an 'alarming fall in fertility rate' ; so much so that in six villages inhabited by people practising j h u m cultivation, 'barren families' constituted 8·7% of the total number, while in eight villages where wet

[2] Guha, B. S., 'Tribal Welfare in India' in *Social Welfare in India* issued on behalf of The Planning Commission, Government of India, New Delhi, 1955. P. 499.

cultivation had replaced j h u m, the figure had gone up to 28·0%. Even if this astonishing figure be taken as correct, we are not told why the observed barrenness should be ascribed to 'malnutrition' following the change in agricultural practice, and not to other causes arising out of contact. For it is well known in other parts of the world that famine and malnutrition tend to increase rather than decrease birth-rate ; while a generous intake of proteins in the diet is supposed to be accompanied by a slowing down of reproduction.

In another publication issued by the Government of India,[3] P. N. Sen Gupta of the Department of Anthropology, Government of India, contributed a paper in which it is claimed that the food intake of the Abors practising j h u m yields a higher calorific value (2,962) than that available to the average 'non-tribal Indian', which is given as 2,550. We do not know the source of the latter ; but the investigations of Robert McCarrison, W. R. Aykroyd or their successors in the Nutrition Research Laboratory in Coonoor tend to show that the average Indian diet, whether in the north or south of India, tends to fall substantially below the recommended requirement of 2,590 calories. A paper was also read by Sen Gupta in the Indian Science Congress in Baroda in 1955, and during the discussion which followed, it was realized that the observations had not been spread over the whole year, and in significantly different ecological areas inhabited by the Abors or related tribes. Figures had also not been obtained as to how many persons could be supported per square mile at the observed optimum level by means of j h u m cultivation.

To base comparisons on slender data without due regard to the carrying capacity of each productive system may lead to serious errors even though one might be prompted by real sympathy for a tribe which has been forced to change against its will due to the pressure of economically more advanced peoples.

Under such circumstances, more caution of a scientific nature is needed, while the fact that areas where shifting culti-

[3] Sen Gupta, P. N., 'Dietaries of Primitive Tribes' in *The Adivasis*. The Publications Division, Ministry of Information and Broadcasting, Government of India, 1955. Pp. 91—96.

vation can be practised are becoming more and more scarce as the population in the hills and the valleys tend to increase, should also not be lost sight of. Our purpose in planning is not merely to feed a small number of people well, even if that were possible by hunting and shifting cultivation, but to raise the standard of life of many, and by the promotion of methods of agriculture and industry which can carry more people for every square mile of land. At the same time, it goes without saying that there should be no social or economic degradation attendant upon such change. Conservatism is all right in its place, but it should never lead to the preservation of inefficient methods of production, which will eventually lead to famine of one kind or another. Desirable culture elements should undoubtedly be preserved, and the change achieved through the promotion of human freedom.

It has been necessary to begin with this rather longish introduction and warning, for otherwise there is a likelihood of social anthropology being distorted by our inner sympathies and prejudices, when it will undoubtedly fail to raise itself to the height of its responsibility and usefulness to which it can reasonably aspire.

After Correct Description, What ?

While trying to attain a high measure of objectivity in respect of the tribal people whom an anthropologist usually studies, we are immediately confronted by a significant fact in India. A tribe like the Gond has been broken up on account of various social tendencies into Raj Gonds who are very nearly Hindu in their social practices, and others who lie comparatively distant in the social scale. Under these circumstances, it is perhaps intellectually more reasonable to perform a rapid and over-all reconnoitre of the tribe, divide the whole into geographical and social divisions distinguishable by chosen criteria of culture absorption, and present descriptions of samples from each of these distinguishable sections. When these isolated pictures are taken together, and when there is also an indication as to the quantitative position of each group

in the total picture, then only shall we be able to approach nearest to reality than otherwise.

Supposing we do succeed in reaching this academic level of objectivity to a reasonable extent, what then ? What shall we say about one section of the tribe or another ? Shall we say that a tribe is a group distinguished by language ? Shall we rather not indicate that those among them who are at an economically low level of productivity should be referred to as 'tribes', rather than those who, to all intents and purposes, have become part of the larger, specialized economy observable among the neighbouring Hindu or Muslim rural inhabitants of India ?

The problem of placing a community in or outside a 'tribal' group is unfortunately no longer of academic interest, but has practical and very real repercussions upon the future line of procedure with regard to tribal welfare in India. Many tribes who have succeeded in retaining their language and some of their social and ceremonial practices, but who are indistinguishable from the vast mass of India's rural humanity in so far as economic enterprise or social neglect is concerned, have rightly sensed that the Government of India are anxious to raise them from the mire in which they have been kept submerged through an age-long policy of short-sightedness. And, immediately, this promise of a kind of favoured treatment creates in them a desire to regard themselves as very different from the world of their Hindu neighbours. To work for the removal of all social and economic disabilities, whether Hindu or non-Hindu, so that all traces of such inequality may no longer mar the face of New India is one thing ; but to claim special privileges is to create inequalities by the backdoor ; inequalities which may have tragic consequences in so far as the body politic is concerned.

In a memorandum submitted to the Backward Classes Commission[4], the writer once suggested that only those should be considered backward who are so by three joint tests. One is that economically the particular group should be poorer in terms of the average income among all classes in the neigh-

[4] See *Man in India*, Vol. 34, No. 2, 1954, pp. 89-98.

bourhood. Secondly, the percentage of education or literacy among them should be lower than the average in the neighbourhood. And, thirdly, the people are reckoned as among those from whom water is not acceptable to Brahmins, or who are not served by Brahmin priests such as also serve other castes. If any single test is applied for backwardness, like the last one, there is every likelihood that educated, or comparatively well-off, but socially degraded castes will monopolize all the beneficial measures introduced by the Government of India, and thus deprive those who need it more urgently from deriving adequate benefit from them.

If I am permitted to tread upon ground which is usually considered taboo in anthropological circles, may I draw a parallel from the history of our recent past ? When Mahatma Gandhi tried to canvass for the support of the Muslims in the national struggle for independence, he invited the Nation to subscribe to the Khilafat movement. The essence of that support lay in the fact that the Muslims were considered to be a community who while residing in India might owe extra-territorial loyalty to a theocratic, and also secular, ruler outside.[5] How this consideration of the Muslim religious group as one calling for special treatment, *because* they were a culturally distinguishable group, eventually brought about most unhappy consequences in our march towards independence lies within the living memory of every one of us. Let us not, by a special concern for tribal people, as distinguished from other sections of our masses who suffer from very nearly the same disabilities, encourage a similar force endangering the social solidarity of the Indian people. Let us all unite, not in freeing the tribal people from all bondage, but in devising means which will free all disinherited people from bondages of any kind, whether they are tribal or non-tribal in origin.

Mahatma Gandhi's definition of Swaraj was that it ought to mean freedom of the masses from all forms of exploitation or inequality, achieved through the promotion and organization of

[5] See 'Hindu-Musalman Samasya o Gandhiji' (The Hindu-Muslim problem and Gandhiji) in *Sanibarer Chithi* (in Bengali), Chaitra, 1354 B. S.

their non-violent strength. And his 'masses' did not draw any line of distinction between the tribal and non-tribal inhabitants of India.

Responsibility of Social Workers among Tribes

A great responsibility therefore rests upon all social workers engaged in the education and economic upliftment of tribal people in particular.

Just as in our scientific responsibilities, we must avoid drawing a picture of tribal culture distorted by subjective sympathies and prejudices, so also in trying to work for them, and with them, we must be extremely cautious not to encourage separatist tendencies, and thus ultimately defeat the very purpose of an all-round freedom, such as the Government of India have resolved to attain.

How can this be done ? Anthropologists in India are very well aware of the fact that when one section of a tribe changes its occupation and becomes comparatively more wealthy than their brothers, they immediately tend to split off into another endogamous group marked by a higher status, and practising a slightly *purer* form of occupation, 'purer' according to the scale prevalent among Brahminical peoples. We know of tribes, sections of which have given up eating particular kinds of food, drinking particular drinks, and who have, at the same time, tended to give up love marriage, widow remarriage and broken up their ancient youth organizations, just because the economically superior Hindus do not have these practices and look down upon the tribes because of these practices. Many sections of tribes again have taken to specialized occupations, adjusted to particular situations in a geographical area, and tend to cling to it as many castes cling to their traditional occupation, because the latter gives them an assured status in the hierarchy of castes and also because it tended in the past to offer protection and economic security.

The most important task to which the social worker among tribal peoples must address himself is to combat *in every way* this advent by the backdoor of practices and traditions which are reminiscent of the caste system in India. While the pro-

gressive forces among the Indian people are trying to combat the caste system in so far as it creates the roots of inequality, they should, on no account, allow their battle to be weakened by a surreptitious invasion of the tribal world by the weakening elements of caste.

But how can this be done ? In India, we have had the great leadership of Gandhi, and this is what he recommended in our battle against untouchability within Hindu society. In the world of the Hindu, occupations are graded into many kinds according to status. Any occupation with which blood, death, and dirt (faeces), are connected, is looked upon as low. Ceremonial purity and its practice are important elements in the life of a Hindu. Gandhi knew this ; but he taught us instead that if any occupation was socially necessary and valuable, it could not be given a low status. Following Ruskin and Tolstoy, he said that the labour of a lawyer and barber entitled them to the same wages, if both their occupations were needed by society. In his lifetime, he tried to enlist Brahmin and other 'upper caste' youth for learning and teaching to our rural people better methods of flaying dead cattle and producing well-tanned leather. He loved to call himself a sweeper, b h a n g i ; and we know how under the noble inspiration of this social revolution hundreds shed their horror of handling dirt, and tried to equalize the status of sweepers with the rest of the population of India.

The same lesson may be tried in respect of tribal uplift. While promoting new industries, while educating young people from among the Adivasis, our purpose must be not reformist, but revolutionary. We must not aim at raising the status of the tribal people and find place for them in caste's social scale ; but should do away with all class-wise scales attaching to birth or to occupation altogether. If we encourage any scales at all, let it be on the basis of personal merit, for good work done in the interest of social service.

If the tribal people wish to raise their status, let it not be in hostility to the rest of their neighbours, but in close co-operation with similarly placed masses of submerged, or in Swami Vivekananda's words 'suppressed', humanity in a common

social enterprise inspired by the highest ideals of equality and justice.

Tribal Research Bureaus

In this noble task of upliftment, even if that were temporarily restricted to the 'Scheduled Tribes' of India, there is a great part which the Tribal Research Bureaus can usefully play.

Anthropologists have often not been social workers, and social workers have not usually been anthropologists. Specialization has its obvious merits in any scientific discipline, but, when, as in social science, thought and action run hand in hand, it may be more fruitful to bring about a controlled co-ordination between the two.

A tree is held to the soil by many roots. It is only when we try to pull it out from the soil, that we realize at once which root holds the tree more firmly than another. In the same manner, it is easy to observe the roots which perpetuate a social system among a tribe. But when we try to deal with it actively, as a gardener does with a plant, we at once realize new features about the culture in question. We discover, for instance, the varying strength of the various roots which keep it tied down to other parts of culture ; and this purely theoretical addition to knowledge cannot be gained except through the observation of, or perhaps participation in, social action.

Only, let our action in India be inspired by the noblest ideals to which we have been made heirs through the life and martyrdom of Mahatma Gandhi. Nothing short of that ought to satisfy our great nation. And let our altruistic endeavours, at the same time, not be coloured by any kind of sentimentalism, but be inspired by the highest academic discipline which we can attain in our scientific enterprise.

Let us try to discuss the responsibilities and also opportunities of a rightly trained anthropologist in a concrete fashion.

The chief banes of tribal life in India have been poverty, disease and lack of education. The language of the child has undoubtedly to be employed for its primary education. But

the teaching of language itself is not education. The Tribal Research Bureaus of the State Governments are, if I am not wrong, entrusted with the task of giving advice in the preparation of text-books in tribal languages. This is a difficult task, and the worker in the Bureau must not only be skilful in the use of a tribal language, but he must also know what he is about. The objects or things or actions which figure in the text-books must not belong to the language of the tribe *as in isolation*, but words and ideas or actions which have already been absorbed or are in common use among the tribe as it is in transition, must also find their rightful place. Great care should be exercised not in accentuating differences, but in showing how the tribe and their neighbours have many points in common. While the special songs and dances and artistic attainments of the tribe, or their legends, should find a place in school-books, items from the neighbouring cultures should also be incorporated in the lesson so as to familiarize tribal children with the thoughts and activities of their neighbours.

By way of complement, one might suggest that the school-books of our rural children should have similarly a balanced measure of introduction to the traditions inspiring the life and activities of our tribal neighbours.

The task outlined above belongs not so much to an anthropologist as to a linguist and educator. Let me now, finally, describe two fields of activity in which fundamental research of a more professional nature, undertaken by Tribal Research Bureaus, can prove to be of great value to the nation as a whole.

It is with some feeling of satisfaction that I beg to refer to the excellent work now being done by the Tribal Research Bureau of the State of Orissa. The population problem of India is one of our hardest problems to solve ; and there is a justifiable fear that the rate of increase in economic prosperity may be practically rendered nugatory by an equal increase in our population. Unfortunately we have no data on the net reproductive index of any section of our people. Fluctuations in total population as recorded in the censuses, are the result of many factors, of which the net reproductive index of different

sections of the population is only one of the contributaries. We know something about diseases in India, how epidemics reduce population ; but we have no data as to whether poverty increases reproduction, or what happens to the latter on account of prosperity. We do not know again how endogamy and close inbreeding as through cross-cousin marriage or maternal uncle-niece marriage affects reproduction, if it does so at all.

While India has set its mind upon family planning, we cannot work in the air. The Tribal Research Bureau, through the generous policy of the Ministry of Tribal and Rural Welfare of the Government of Orissa, has undertaken investigation about the net reproductive index of the very nearly completely endogamous tribe of Juangs in central Orissa. The tribe numbers 12,000 or more ; and already the Bureau has covered a little over 20% of the sample. When the celebrated biologist, Professor J. B. S. Haldane was in India last year, he became interested in this work, as in his opinion, a larger sample of primitive endogamous people had been covered here than in any other part of the world. He also wrote that the data were likely to be comparatively more accurate 'since they are based on the work of a single anthropologist rather than of a number of enumerators trained primarily for economic work,' as in the case of some of the parallel surveys undertaken by official agencies in the past.

Such work, not only among Scheduled Tribes, but also among Scheduled Castes all over India can be undertaken by scientifically trained investigators attached to the Research Bureaus in the States of India. The investigation among other castes would offer suitable comparative material for interpreting data derived from tribal sources. And this fundamental research will be of service, not only in tribal upliftment, but in connection with our demographic problem which bids fair to defeat many of our otherwise laudable endeavours for the eradication of nation-wide poverty.

Let me take up, finally, another item of investigation which Tribal Bureaus can undertake apart from their normal, routine responsibility of investigation on the effect of new schools, or a s h r a m a establishments set up in the midst of tribal areas.

The latter work can and should be undertaken ; but it does not usually call for any special competence not within the reach of administrative officers who are already entrusted with development schemes all over our country. Tribal Research Bureaus can and should have work entrusted to them which promises to be of a technical nature and of more fundamental importance.

We know very well that Hinduism has grown by the incorporation of many tribal cults, until it has become a kind of federation of religious beliefs and practices. In parts of West Bengal, there are castes who are probably tribal in origin, and who are entrusted with the worship of local gods and goddesses. Brahminical people offer worship to these local divinities through the help of the so-called 'lower castes'; and similarly in the temples where Brahmin priests are employed, tribal or 'low-caste' people, and even sometimes Mohammedans, come to offer a sacrifice or two. The relation which subsists between different castes, the way in which one group participates in the religious practices of another, may throw an important light on two of the obscure phenomena of Hindu civilization, namely, the growth and elaboration of the caste system itself, and the evolution of the federation of religious beliefs which goes by the name of Hinduism.

Caste has to go. But it seems to have rooots which prevent its final liquidation. If we are to hasten the process of the formation of a 'casteless, classless society', an ideal which the Indian Nation has determined to achieve, then, it is of the greatest importance, by way of fundamental research, to accumulate by painstaking and intelligent endeavour information of the kind which will make our efforts more efficient and more fruitful.

Let me hope that the Tribal Research Bureaus, and perhaps more than they, the Universities and the Government Department of Anthropology, will address themselves to this noble task of furthering the cause of national reconstruction.

FINGER PRINTS OF ORISSAN ABORIGINES

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AND

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(*Received on 6th May, 1957*)

Introduction

THE following finger print data[1] were collected during February-March, 1956, in the course of anthropological studies among the aborigines of Orissa, particularly the Juangs. The data were mostly collected from the former states of Dhenkanal, Keonjhar and Pal Lahara.

The Data

The total data comprise 91 Juangs (74 males, 17 females), 63 Sabaras (54 males, 9 females), 16 Khonds, 15 Panos, 11 Santals, 9 Gonds, 6 Mundas, 6 Pauri Bhuiyas, 3 Towuras, and 3 Kisans. The last eight groups comprise males only.

The distribution of the different finger print patterns among the above 10 groups is given in Table 1.

Table 2 shows the percentage of the different finger print patterns, when all fingers are combined together.

Table 2 also shows the different indices derived out of the different finger print patterns. Both the male Juangs and Sabaras show highest frequency of loops, the percentage being 56·64 and 55·89 respectively. The whorls occur in the percentages of 42·0 and 42·43 respectively. The females of both the above groups also show the above general order of

[1] Thanks are due to Ajit Kishore Ray of the Tribal Welfare Dept., Government of Orissa, for his help in the collection of the finger print data. The Tribal Welfare Dept. also rendered all possible assistance in our work, for which thanks are also due to them. The palm prints will form another subject of study by Manish Chakravarty along with other aboriginal data of his own collection.

more loops than whorls, though the Sabara women show the highest frequency of loops (67·42%) and the lowest of whorls (24·72%). The female Sabara data are based upon 9 individuals only and much reliance cannot be placed upon this variation. The largest sexual difference is, however, seen in the frequency of arches, which are conspicuously higher in the case of females than males. Among the Juangs, the males show 1·36% arches against 3·53% of the females, while the Sabara males show 1·68% of it against 7·86% among females.

This difference is also reflected in the arch/whorl index, where the females show a higher index than the males, the Sabara females showing the highest index of 31·82. The pattern intensity index appears to be the same in all the four groups and no sexual difference is indicated. Furuhata's index, which is also based on loops and whorls, gives variable figures for the four groups.

Poll (Cummins and Midlo, 1943) showed that the above

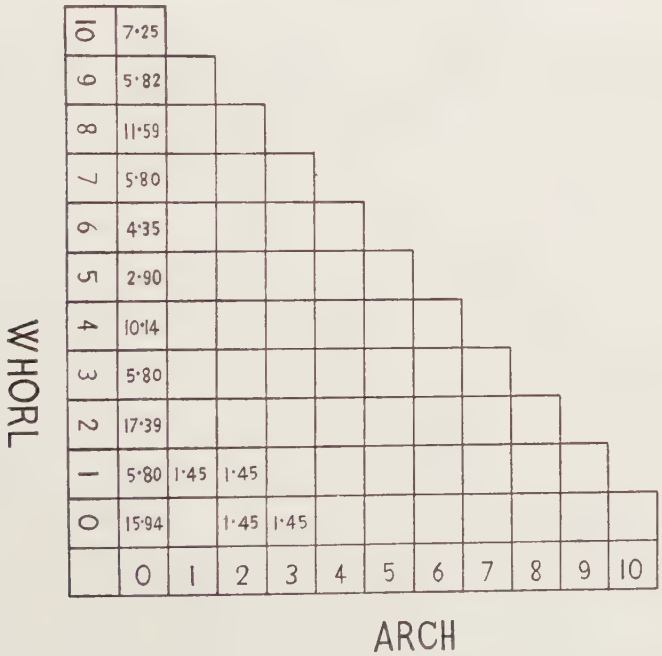

Fig. 1. Juang Male

indices are not adequate for showing the trifold pattern (arch-loop-whorl) of the finger prints. He proposed the construction of the manuars in which the three patterns are shown in a triangular pyramid. Figs. 1 and 2 show the two bimanuars for the male Juangs and Sabaras respectively.

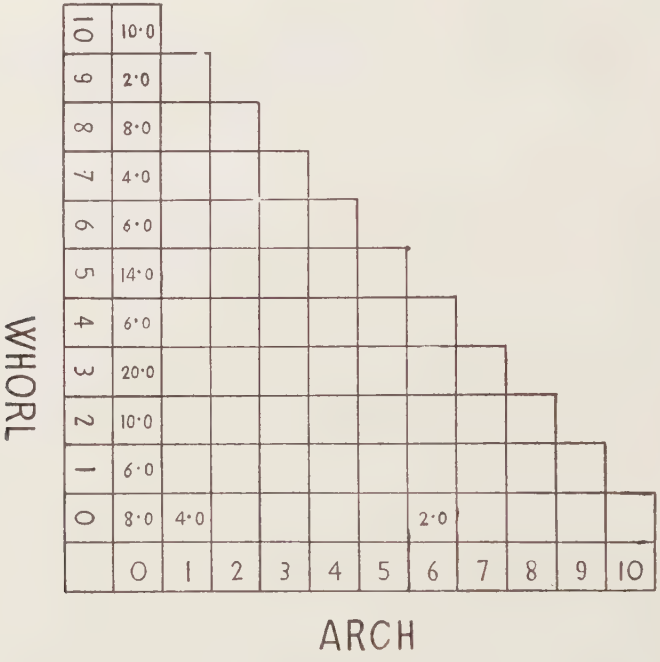

Fig. 2. Sabara Male

The two bimanuars show nearly the same distribution. The Juangs show the highest peak at 2w81, while the Sabaras show the same at 3w71.

Following Volotzkoy (Cummins and Spragg, 1938) monomorphic hands have also been calculated for all the peoples shown in Table 3. Its percentage has been found to be 30·40% for Juang males and 29·41% for females. Sabara males show the same to be 27·78% as compared 16·66% among females.

The frequency of symmetry and asymmetry has also been worked out for the above groups as shown in Table 4. The Juang females show the highest frequency of asymmetry

(27·00%), about twice that of the Sabara females (13·64%). The Juang and Sabara males show almost equal amount of asymmetry (19·95% and 18·87% respectively). The Pano and the Khond also show almost the same values, though much reliance cannot be placed on such small samples.

Discussion

It will be seen from the previous tables that both the Juangs and Sabaras show the same distribution of finger print patterns. In both, loops predominate over whorls. Among the male Juangs the total loops appear as 56·64% in comparison with 55·89% of the male Sabaras. The percentage of whorls is 42·00 among male Juangs compared with 42·43 among the Sabaras. The frequency of arch is 1·36% among the former and 1·68% among the latter. The data from other tribes are too small for any kind of generalization. The Pano show also the highest frequency of loops (59·73%) above whorls (32·88%) and the frequency of arch is very high (7·38%). In this character they appear to be closer to the Khonds with their 5·14% of arch. The Khonds too preponderate in loops but the difference between the loops and whorls is the least of all.

One of us (Sarkar, 1954) proposed that an approximate whorl : loop ratio of 60 : 40 is probably a characteristic of the Veddids or Australoids. This is also confirmed by the finger print data of the Australian aborigines (Cummins and Setzler, 1951), where whorls occur in 75·3% and loops in 22·1%.

The Mundari-speaking peoples, on the other hand, are characterized by a higher frequency of loops than whorls, probably a ratio reverse to that mentioned above. This is borne out by the Santal frequency published by Verma (1952)[2], which agrees with our small sample. Chakravarti's unpublished data on Munda males show almost equal proportions of loops (48·38%) and whorls (49·65%), while in

[2] Biswas (1956) has now given an entirely different picture of the Santal finger-prints. It is strange that he did not correct Verma either in *Man in India* or when one of us quoted him (1954). It is, however, now known that the Santal data are based on 21 persons.

the female Mundas the loop : whorl ratio of 60 : 40 is nearly present (loops, 57·24% : whorls, 38·60%).

The Juangs also show the Munda ratio of higher loops than whorls and the same is the case with the Sabaras. Rife (1954) has shown ethnic variations in the pattern intensity index of Cummins. The pattern intensity indices of the various aboriginal tribes, known so far, are as follows :

Pahira (male)	15·23
,, (female)	14·18
Munda (male)	14·76
,, (female)	13·44
Oraon (male, W. Bengal)	15·39
,, (female, ,,)	15·25
Oraon (male, Ranchi)	15·67
,, (female, ,,)	15·00
Kurmi Mahato (male)	14·38
Adiyan ,, ...	14·72
Vettukuruma ,, ...	12·59
Paniyan ,, ...	15·67
Male ,, ...	12·31
Juang (male) ,, ...	14·06
,, (female)	13·53
Sabara (male)	14·07
,, (female)	11·68
Khond (male)	13·69
Pano (male)	12·55
Andamanese (male & female) ...	12·26

It will be seen that the pattern intensity index varies between 11·68 in Sabara females to 15·67 among the Paniyans and the male Oraons (Ranchi). The Paniyans appear to be close congeners of the Veddids and in physical features and blood groups they do not very widely diverge from the Australian aborigines (Sarkar, 1954). The pattern intensity index of the Australian aboriginal males is 17·73 while that of the females is 17·21 (Cummins and Setzler), and the high index is due to the very high frequency of whorls (75·3%). The

Paniyans, with their pattern intensity index of 15·67, thus do not stand very far from the Australian aborigines.

The Juangs and the Sabaras show a very close coincidence in the above index, the low index of the Sabara females being possibly due to the small size of the sample. It is as yet too premature to say anything on the ethnic relationship of the Indian aborigines in relation to the pattern intensity index since the data are yet small and the indices may not give a correct value of the tribe.

REFERENCES

Biswas, P. C.
1956 *Santals of the Santal Parganas*, Delhi.

Chakravarty, M.
1955 'A Note on Male Dermatoglyphics', *Man in India*, 35, 315.

Cummins, H. and Setzler, F. M.
1951 'Dermatoglyphics of Australian Aborigines', *Am. J. Phys. Anth.*, 9, 455.

Cummins, H. and Midlo, C.
1943 *Finger Prints, Palms and Soles, An Introduction to Dermatoglyphics*, Philadelphia.

Sarkar, S. S.
1954 *The Aboriginal Races of India*, Calcutta.

Rife, D. C.
1954 'Dermatoglyphics as Ethnic Criteria', *Am. J. Hum Gen.*, 6, 319.

Verma, B, B,
1952 'Dermatoglyphics of Finger among Oraons of Chota Nagpur', *Man in India*, 32.

Cummins, H. and Spragg S. D. S,
1938 'Dermatoglyphics in the Chimpanzee, Description and Comparison with Man', *Hum. Biol.*, 10, 450,

TABLE 1

Finger print Patterns of Orissan Aborigines

(Abs. Nos.)

Types.	Left Hand					Right Hand					Total
	I	II	III	IV	V	I	II	III	IV	V	
1a, Juang (male)											
Whorl	40	36	24	42	14	45	30	21	36	19	307
Radial Loops	0	6	0	0	0	0	6	0	0	0	12
Ulnar Loops	32	26	50	31	59	28	34	53	37	52	402
Arch	1	5	0	0	0	0	3	0	0	1	10
Total	73	73	74	73	73	73	73	74	73	72	731
1b. Juang (female)											
Whorl	9	11	7	10	4	4	5	5	8	3	66
Radial Loops	0	0	0	0	0	0	0	0	0	0	0
Ulnar Loops	8	4	9	7	13	13	10	11	9	14	98
Arch	0	2	1	0	0	0	2	1	0	0	6
Total	17	17	17	17	17	17	17	17	17	17	170
2a. Sabara (male)											
Whorl	26	20	16	33	14	32	23	12	34	17	227
Radial Loops	1	2	0	0	0	0	1	0	1	0	5
Ulnar Loops	26	30	36	20	38	21	29	41	19	34	294
Arch	1	2	2	0	1	1	1	0	0	1	9
Total	54	54	54	53	53	54	54	53	54	52	535
2b. Sabara (female)											
Whorl	6	2	1	1	1	6	2	0	2	1	22
Radial Loops	0	0	0	0	0	0	1	0	0	0	1
Ulnar Loops	3	6	6	7	8	3	5	7	6	8	59
Arch	0	1	2	1	0	0	0	2	1	0	7
Total	9	9	9	9	9	9	8	9	9	9	89
3. Khond											
Whorl	7	7	4	11	3	7	6	5	11	5	66
Radial Loops	0	1	0	0	0	0	1	0	0	0	2
Ulnar Loops	7	7	10	5	13	3	6	9	5	11	81
Arch	2	0	2	0	0	1	2	1	0	0	8
Total	16	15	16	16	16	16	15	15	16	16	157

Types	Left Hand					Right Hand					Total
	I	II	III	IV	V	I	II	III	IV	V	
4. Pano											
Whorl	7	5	3	6	2	8	6	2	8	2	49
Radial Loops	0	1	0	0	0	0	1	0	0	0	2
Ulnar Loops	8	5	9	9	13	7	5	11	7	13	87
Arch	0	4	2	0	0	0	3	2	0	0	11
Total	15	15	14	15	15	15	15	15	15	15	149
5. Santal											
Whorl	7	7	3	7	3	6	5	3	6	3	50
Radial Loops	0	0	0	0	0	0	1	0	0	0	1
Ulnar Loops	4	4	8	4	8	5	5	8	5	8	59
Arch	0	0	0	0	0	0	0	0	0	0	0
Total	11	11	11	11	11	11	11	11	11	11	110
6, Gond											
Whorl	4	4	1	3	0	3	1	1	3	0	20
Radial Loops	0	0	0	0	0	0	3	0	0	0	3
Ulnar Loops	5	5	7	6	9	6	3	8	6	9	64
Arch	0	0	1	0	0	0	1	0	0	0	2
Total	9	9	9	9	9	9	8	9	9	9	89
7. Munda											
Whorl	5	4	3	4	4	6	4	2	5	3	40
Radial Loops	0	0	0	0	0	0	0	0	0	0	0
Ulnar Loops	1	2	3	2	2	0	2	4	1	3	20
Arch	0	0	0	0	0	0	0	0	0	0	0
Total	6	6	6	6	6	6	6	6	6	6	60
8. Pauri Bhuiya											
Whorl	2	2	1	4	3	2	2	1	0	3	20
Radial Loops	0	0	0	0	0	0	0	0	0	0	0
Ulnar Loops	4	4	5	2	3	4	4	5	5	3	39
Arch	0	0	0	0	0	0	0	0	0	0	0
Total	6	6	6	6	6	6	6	6	5	6	59
9. Townra											
Whorl	2	2	2	3	2	2	2	0	3	2	20
Radial Loops	0	0	0	0	0	0	0	0	0	0	0
Ulnar Loops	1	1	1	0	1	1	1	3	0	1	10
Arch	0	0	0	0	0	0	0	0	0	0	0
Total	3	3	3	3	3	3	3	3	3	3	30

Types.	Left Hand I	II	III	IV	V	Right Hand I	II	III	IV	V	Total
10. Kisan											
Whorl	2	1	1	1	1	2	1	1	1	1	12
Radial } Loops	0	0	0	0	0	0	0	0	0	0	10
Ulnar } Loops	1	2	2	2	2	1	2	2	2	2	18
Arch	0	0	0	0	0	0	0	0	0	0	0
Total	3	3	3	3	3	3	3	3	3	3	30

TABLE 2

Finger prints of Orissan Aborigines (all fingers combined)

Whorls		Loops: Radial		Loops: Ulnar		Loops: Total		Arch		Indices 1	2	3
No.	%	No.	%	No.	%	No.	%	No.	%			
1a. Juang (male)												
307	42·0	12	1·64	402	55·0	414	56·64	10	1·36	14·06	3·25	74·15
1b. Juang (female)												
66	38·82	0	0	98	57·65	98	57·65	6	3·53	13·53	9·09	67·34
2a. Sabara (male)												
227	42·43	5	0·93	294	54·96	299	55·89	9	1·68	14·07	3·96	99·12
2b. Sabara (female)												
22	24·72	1	1·12	59	66·30	60	67·42	7	7·86	11·68	31·82	36·67
3. Khond												
66	41·97	2	1·34	81	51·55	83	52·89	8	5·14	13·69	12·12	79·52
4. Pano												
49	32·88	2	1·34	87	58·39	89	59·73	11	7·38	12·55	22·45	55·05
5. Santal												
50	45·45	1	0·90	59	53·64	60	54·54	—	—			
6. Gond												
20	22·47	3	3·37	64	71·91	67	75·28	2	2·25			
7. Munda												
40	66·67	—	—	20	33·33	20	33·33	—	—			
8. Pauri Bhuiya												
20	33·89	—	—	39	66·10	39	66·10	—	—			
9. Townra												
20	66·67	—	—	10	33·33	10	33·33	—	—			
10. Kisan												
12	40·0	—	—	18	60·0	18	60·0	—	—			

1. Pattern intensity index ; 2. Arch/whorl index ; 3. Furuhata's index.

TABLE 3

Frequency of Monomorphic Hands

	Left				Right				Total	
	Whorl		Loops		Whorl		Loops			
	No.	%	No.	%	No.	%	No.	%	No.	%
1a	8	5·40	14	9·46	9	6·08	14	9·46	45	30·40
1b	2	5·88	2	5·88	1	2·94	5	14·71	10	29·41
2a	6	5·55	8	7·41	8	7·41	8	7·41	30	27·78
2b	0	0	1	5·56	0	0	2	11·10	3	16 66
3	1	3·12	3	9·38	2	6·24	3	9·38	9	28·12
4	1	3·33	1	3·33	0	0	2	6·67	4	13·33
5	3	13·64	0	0	3	13·64	4	18·18	10	45·46
6	0	0	2	—	0	0	3	—	5	—
7	7	—	1	—	1	—	0	—	3	—
8	2	—	0	—	2	—	0	—	4	—
9	2	—	0	—	0	—	0	—	2	—
10	1	—	1	—	1	—	1	—	4	—

TABLE 4

Frequency of Symmetry and Asymmetry.

	Symmetry		Asymmetry	
	No.	%	No.	%
1a	289	80·05	72	19·95
1b	62	73·0	23	27·0
2a	215	81·13	50	18·87
2b	38	86·36	6	13·64
3	64	82·05	14	17·95
4	61	81·33	14	18·97
5	49	89·09	6	10·91
6	36	80·0	9	20·0
7	22	73·33	8	26·67
8	24	82·76	5	17·24
9	13	86·67	2	13·33
10	15	100·0	0	0

THE KABUI[1]

by H. C. Chakladar

AND

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Calcutta

(Received on 21st February, 1957)

THE Kabuis are one of the Naga tribes found in the hills of Manipur. Other members of this group are the Tangkhul, Mao and Marām Naga, Kolyā, Khoirao or Mayang Khong, Quoireng, Chiru and Marring.

The Kabui live on the hills from Kangchup Khul (93° 47′ E, 24° 52′ N. Hill ht. 5,066 ft.) in the north to Laimanai hills (93° 42′ E, 24° 33′ N. Hill ht. 4,816 ft.) in the south. To the west they extend up to the range of hills bounding the Makru valley on the east. To the north of Kangchup Khul live the Kachcha Naga and to the south of Laimanai the Kuki tribes.

1931		1921		1911		1901	
M	F	M	F	M	F	M	F
8854	9977	6906	7838	8798	9449	527	607
18,831		14,794		18,247		1,134	

Numbering 18,831, according to Census of 1931, they record a slow increase since 1901, the fall in number in 1921 might be due to either the influenza epidemic or to some feature of the census operation.

In the following pages an attempt has been made to describe the physical characteristics of the Kabui Nagas of Manipur. The following measurements were made on 100 (male)

[1]The data were collected by the first author in 1936 and the calculations and observations thereon were made by the second author.

individuals : stature, head length, head breadth, head height, face length, face breadth, nose height, nose breadth, orbito-nasal diameter and orbito-nasal arc. The following indices were calculated : cephalic index, altitudinal index, facial index, nasal index and orbito-nasal index. Besides these, observations on a number of them were also made of skin colour, eye slit, eye fold, eyebrow, supra-orbital ridge, nasion depression, nose bridge, nose septum, zygomatic arch, lip, chin, prognathism and angle of the lower jaw.

The measurements and observations were made according to the method prescribed by Martin.

Table 1

Showing the Mean and the Variability of the Different Characters

mm	m	σ	v
Stature	1558· 7±3·72	55·14±2·63	36·02±2·11
Head length	185·87± ·37	5·46± ·26	2·93± ·14
Head breadth	143·97± ·29	4·33± ·21	3·01± ·14
Head height	117·86± ·66	9·84± ·47	8 35± ·40
Face length	117·15± ·44	6·59± ·31	5·62± ·27
Face breadth	134·96± ·27	3·99± ·19	2·96± ·14
Nose height	53·39± ·27	3·95± ·19	7·39± ·35
Nose breadth	37·26± ·23	3·47± ·17	9·31± ·45
Orbito-nasal Diameter	98·42± ·32	4·75± ·23	4·83± ·23
Orbito-nasal Arc	110·81± ·40	5·87± ·28	6·29± ·25
Cephalic Index	77·48± ·18	2·61± ·12	3·49± ·17
Altitudinal Index	63·36+1 ·35	5·22± ·25	8·24± ·39
Facial Index	86·42± ·31	4·67± ·22	5·44± ·26
Nasal Index	67·95± ·49	7·20± ·34	10·60± ·20
Orbito nasal Index	112·40± ·37	5·48± ·26	4·87± ·23

Table 2

Showing the Range of Distribution

Stature	1387-1712	325
Head length	173- 198	25
Head breadth	137- 156	19
Head height	99- 139	40
Face length	102- 133	31
Face breadth	125- 147	22
Nose height	40- 62	22
Nose breadth	31- 48	17
Orbito-nasal Diameter	86- 111	25
Orbito-nasal Arc	95- 125	27
Cephalic Index	71·88-83·43	11·55
Altitudinal Index	54·10-79·43	25·33
Facial Index	71·83-100·0	28·17
Nasal Index	53·70-88·10	34·40
Orbito-nasal Index	100·98-124·74	23·76

Table 3

Specification

Stature	Pygmy	X—1299	X
	Very short	1300—1499	9
	Short	1500—1599	67
	—Medium	1600—1639	14
	Medium	1640—1969	5
	Medium +	1670—1699	3
	Tall	1700—1799	2
	Very tall	1800—1199	X
Cephalic Index	Dolichocephalic	X—75·9	29
	Mesocephalic	76·0—80·9	59
	Brachycephalic	81·0=85·4	12
	Hyperbrachycephalic	85·5—X	X
Altitudinal Index	Chamaecephalic	X—57·6	13
	Orthocephalic	57·7—62·5	37
	Hypsicephalic	62·6—x	50
Facial Index	Hyper-enryprosopic	X—78·9	1
	Euryprosopic	79·0—83·9	64
	Mesoprosopic	84·0—87·9	33
	Leptoprosopic	88·0—92·9	2
	Hyperlepto-prosopic	93·0—X	X
Nasal Index	Hyperleptorrhine	X—54·9	5
	Leptorrhine	53·0—69·9	25
	Mesorrhine	70·0—84·9	38
	Chamaerrhine	85·0—99·9	24
	Hyper-chamaerrhine	100·0—X	9
Orbitonasal Index	Platy-opic	X—109·9	34
	Meso-opic	110·0—112·9	20
	Pro-opic	113·0—X	46

TABLE 4

Showing the Correlation of Stature, Cephalic index and Nasal index.

STATURE

	C. I.			Short			Medium				Tall	
	N.	I		1599			1600		1699		1700	
85·0	70·0-84·9	69·9	75·9	76·0-80·9	81·0	75·9	76·0-80·9	81·0	75·9	76·0-80·9	81·0
Platy.	Meso.	Lepto.	Dolicho.	Meso.	Brachy.	Dolicho.	Meso.	Brachy.	Dolicho.	Meso.	Brachy.
			18	29	5	6	7	×	×	1	×
			4	15	6	1	4	1	×	1	×
			×	2	×	×	×	×	×	×	×

On correlating the three characters, namely, Stature, C. I. & N. I., it is seen (Table 4) that 29% are short-mesocephalic-leptorrhine, 18% short-dolichocephalic-leptorrhine and 15% short-mesocephalic-mesorrhine. Now merging the short and medium statured groups we find that the short to medium-mesocephalic leptorrhine element comprises 36% and short to medium-dolichocephalic-leptorrhine 24% and the two groups together include 60% ; and if short to medium stature-mesocephalic-mesorrhine group is added to them, the percentage rises to 79%. So it appears that these three elements constitute the major factors in the make-up of the Kabui.

Somatoscopic Characters

The prevailing skin colour is clear brown (74·7% on the forehead and 82·8% on the chest) and 21·1% carmine brown and 3·2% pure brown on the forehead, and 14·1% carmine brown and 2% pure brown on the chest.

Hair colour is 67·0% X, 19·6% Y and 13·4% W. Straight hair is a salient feature (94%), and only 6% have wavy hair and there is no woolly hair. Face hair is either scanty or absent—55·9% have scanty beard and 65·2% scanty moustache and beard is medium in 3·8% and absent in 40·5% and the moustache is medium in 3·5% and absent in 31·5%.

The forehead is of medium height (94%), medium breadth (87·5%) and of medium slope (82·8%). But it is high and low in 4% and 2% and broad and narrow in 8·1% and straight and slightly sloping in 5·7% and 11·5% respectively.

The eye colour is dark brown (80·8%) and brown (19·2%). The eye-slit is variable 59·6% oblique and 40·4% straight and the opening is medium in 66·8%, narrow in 30·8% and wide in 2·6%. The epicanthic fold is present as trace in 55·1%, medium in 12·2% and marked in 1% and absent in 31·6%. The eye-brow is scanty in 83·8% and medium in 16·2% and separate.

There is a trace of supra-orbital ridge in 96% and it is of medium prominence in 4%. The nasion depression is shallow (88%) and medium in 11% and deep in 1%. The nasal bridge is straight in 96%, convex in 3% and concavo-convex in 1% and

the septum is horizontal in 67%, directed upward in 23% and downward in 10%.

The zygomatic arch is variable. It is of medium prominence in 65%, markedly so in 30%, and slightly in 5%. The lip is of medium thickness in 81% and thin in 19%. The chin is of medium growth in 86% and prominent in 11% and receding in 3%, and the shape is oval in 43·3%, round in 35·1%, square in 17·5% and pointed in 4·1%. Prognathism is absent in 96·2% and marked in 3·8%. The angle of the lower jaw is submedium in 83% and medium in 17%.

Conclusion

It thus appears that the Kabui are short, meso-cephalic, hypsi-cephalic and eury-prosopic with veriable nose and with straight black hair, brown skin colour, scanty beard and moustache, oblique eye with traces of epicanthic fold. The forehead is medium in height, breadth and slope. The supra-orbital ridge is faintly traced. The nasion depression is shallow, the bridge straight and the septum horizontal. The zygomatic arch is moderately prominent, but marked prominence is not infrequent. The lip is of medium thickness. The chin is of medium growth and the shape is variable. There is no prognathism and the angle of the lower jaw is sub-medium.

ORAL CONTRACEPTIVE IN RELATION TO POPULATION PROJECTION AND FUTURE PLANNING IN INDIA

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(Received on 6th May, 1957)

Planning in India

INDIA, with all her natural resources and vast man-power, still ranks among the underdeveloped countries of Asia. This state of affairs cannot be allowed to last when other countries are advancing rapidly. The Government of India are bent upon improving the standard of living in India and have installed simultaneous development projects in various directions. The first Five Year Plan has just been completed and the resultant effect is really commendable. Erection of dams and construction of canals for irrigation, manufacture of fertilizer and introduction of modern methods of cultivation, have all contributed to the plan of growing more food. Building up of large-scale industries, when completed, will go a long way in meeting the demands of the country and will also help to relieve unemployment to an appreciable extent. A new scheme of development of public health and utilization of accumulated knowledge of science for years, has already resulted in bringing down the death rate in India. Malaria can well be said to have been wiped out. Not only so, but the labour welfare projects and rural development and community projects have all contributed much to the harmonious development and success of the first Five Year Plan. In one word, the Government of India have already achieved a great measure of success in the planning of future India. It has also been reported from time to time by foreign experts and observers, that the development projects have already started improvement of the economic condition of the people.

When other projects are completed, these will certainly help to raise the standard of living appreciably.

But inspite of all these, there is no reason to rest content with the imaginary future, neglecting a gross and basic danger lurking ahead. The population growth is not a static thing. It may be positive or negative. In the case of India, there is every reason to believe that the population will show an overwhelming growth within the next few decades.

If this becomes a fact, it can be well imagined what would be the state of affairs in the long run. For instance, it is admitted that food production can be increased 10% in fifteen years time by intensive cultivation by modern methods, but population growth will increase 15% in ten years, according to the FAO. Similarly, for the other development projects, such as steel production, cement manufacture and other industrial development schemes, by the time the target has been reached the demand of the growing population will easily outstrip production. Such would also be the state of affairs in other spheres of planning such as welfare project, unemployment problem and many others.

Expert Opinion

The above apprehension is supported by the recent report of the Department of Population Research, Princeton University, U. S. A. Under the direction of the International Bank for Reconstruction and Development, which has a direct interest in the economic improvement of the so-called underdeveloped countries, the above organization undertook a broad-based study of the relation between prospective population change and economic development in different areas of India, having a very low per capita income. A group of experts working under Messrs. Coale and Hoover worked for 18 months in India, collecting data both from the Government of India and private organizations and also from their own observation. Even an authority on population like Dr. Warren Thompson of the Princeton University went round India collecting information on his own account. A report

was submitted to the University of Princeton and also to the International Bank.

The report says that there is a good deal of difficulty in estimating the results of family planning activities of the Government as well as private agencies on fertility control in India. The authors of the report are not sure that even a 50% decline in fertility in 25 years will take place, while at the same time they had no doubt about at least a 50% decline in mortality during the same period.

They concluded by saying that a lower fertility will lead to an improved national economy. According to the projection, the total national income will perhaps double itself in 30 years if fertility is unchanged, but it may treble if fertility declined in the near future. The per capita income during the next 30 years may slightly change if fertility does not decline ; on the other hand, a two-fold increase in income per adult consumer may be anticipated if birth-rate diminishes soon and if a 50% reduction is achieved in 25 years. This was also reported by Dr. M. C. Balfour of the Population Council of the Rockefeller Foundation, U. S. A., in the Third All-India Family Panning Conference.

Population Projection

The future state of affairs can be visualized from the following analysis of the expected population growth in India in 1961, 1976 and 2001. It is already known that from 1931 there occurred a sharp rise in population growth. The National Sample Survey report says that for rural couples married before 1930, the average number of children in 2, 7 and 12 years after marriage were 0·08, 0·96, 2·16 respectively as against 0·16, 1·34, and 2·64 for those married after 1930.[1] For the planning of the development projects and economic upliftment, it is essential to know the shape of the population of the future. The Government of India undertook a National Sample Survey and the figures reported above are reproduced from the survey. The expectation of the male life table by 2001 is expected to go upto 48·3 from the current figure of 32·5. Similarly, for the female, expectation is 47·2 in 2001

against the current one of 31·7. This shows that more people will live for longer periods.

The projection of future population as described by the Population Research Department in the Indian Statistical

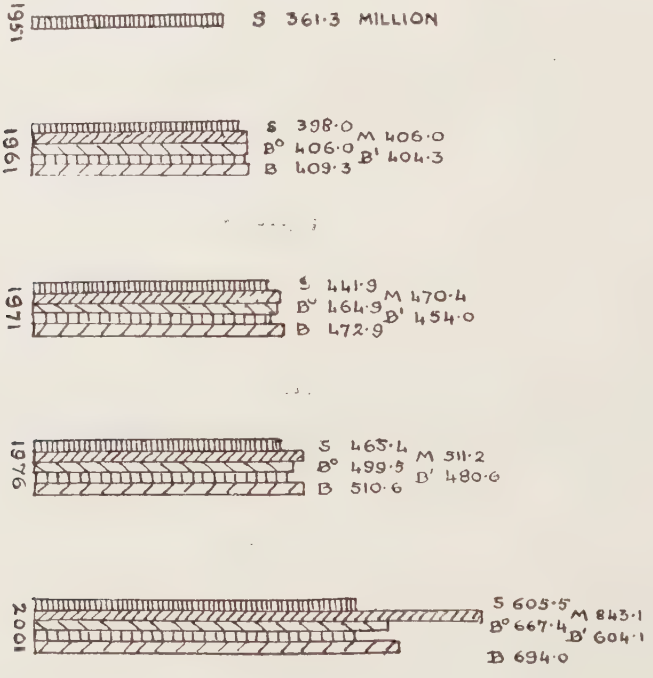

Figure 1. Bar Representation

Institute was based on various reasonable assumptions about the future variations in the components.[2] It may be mentioned here that in this, the component method was followed[3] rather than the exterpolation method.[4]

The authors have considered 4 sets of variations in the components as against stationary conditions in continuation of the 1941-51 census life table, adopting the all-India consistent general fertility rate of 0·185. The variations are as follows :

1. Mortality improving whereas general fertility rate is unchanged. This has been denoted by M.
2. Improved mortality with decline of general fertility,

The tabulated results of projection are as follows :

	Census of 1951	1961	1971	1976	2001
S	36·13 (Crores)	39·80	44·19	46·54	60·55
		BR 41·9	BR 41·0	BR 41·1	BR 41·1
		DR 32·0	DR 30·7	DR 30·7	DR 30·5
M	36·13 ,,	40·60	47·04	51·12	84·31
		BR 41·2	BR 40·5	BR 40·4	BR 38·7
		DR 29·2	DR 25·3	DR 23·8	DR 16·4
B°	36·13 ,,	40·60	46·49	49·95	66·74
		BR 41·8	BR 38·7	BR 37·8	BR 23·4
		DR 29·2	DR 25·0	DR 23·4	DR 15·5
B′	36·13 ,,	40·43	45·40	48·06	60·41
		BR 40·7	BR 36·0	BR 34·3	BR 23·4
		DR 29·0	DR 24·6	DR 22·9	DR 16·2
B	36·13 ,,	40·93	47·29	51·06	69·40
		BR 41·5	BR 38·1	BR 37·0	BR 22·5
		DR 28·2	DR 23·5	DR 21·8	DR 14·1

BR represents birth rate and DR represents death rate.

As regards the sex ratio it was assumed the same in the groups S. M, B°, B′ ranging from 105·6 to 107·8. In the group B the ratio changed from 105·6 to 99·6.

decline starting at a later date, but falls sharply. This is B°.

3. Improved mortality with uniformly declining general fertility from the beginning. This is B′.
4. Assumption of balance of male and female ratio. This is denoted by B. The census of 1951 shows an average of 105·6 male births per 100 female births. This is expected to equalize by 2001 and become 99·6 male births per 100 female births.

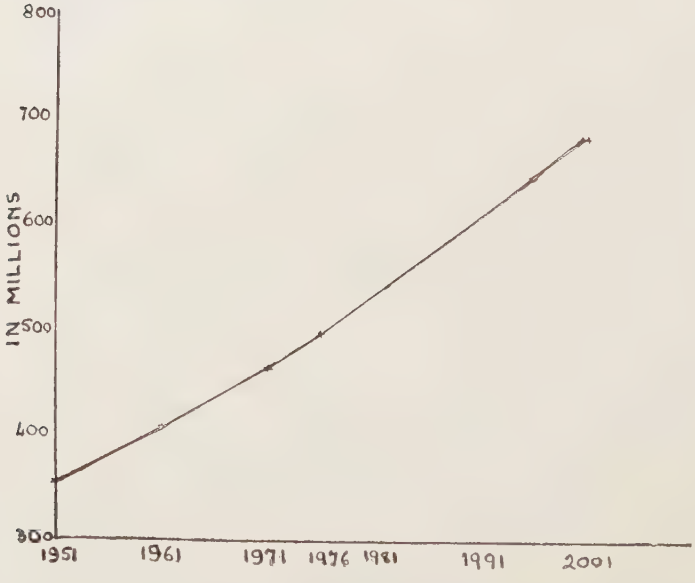

Figure 2

This represents the projection from the average of the expected population growth of the componeuts for the corresponding years : 1951, 36·13 ; 1961, 40·47 ; 1971, 46·08 ; 1976, 49·34 ; 2001, 68·28.

Oral Contraceptive

From the above statistical calculation of population projection it becomes apparent that a tremendous rise in population growth may take place in India and cancel the resultant effects of development projects. The only solution lies in the rapid and effective control of population growth by the introduction of family planning measures on a country-wide scale. The Government of India have already sanctioned 5 crores of rupees

for this purpose in the Second Five Year Plan. But the question lies as to what should be the method for recommendation. Only arousing conciousness in the subjects can never be of any avail. Introduction of other methods used by advanced countries, such as, condom, jelly, diaphragm, suppository etc. can never be an effective measure in India where there are 500,000 villages and where 70% of the total population resides. The above measures are expensive and it is not possible for any government to supply them free. Moreover, their use requires some amount of intelligence and education on the part of the users. The inhabitants of villages are mostly devoid of literacy. The unsophisticated people are shy and at the same time superstitious, and it would never be possible to make them use these measures. The Health Directorate is interested in foam tablets. It is simple no doubt, but it has to be used for each and every union, so in many cases it is costly in the long run. Further it has many more disadvantages, and its protection from moist climate in most parts of India will add to its cost. Lastly, the use of all these methods are not at all acceptable to most of the people. The general majority of people living in villages amidst dire poverty and ignorance have strong likes and dislikes, and even if the Government make a free distribution of appliances after intensive propaganda, the possible benefits will remain highly problematical. On the other hand, oral contraceptive is likely to be accepted by all classes of people whether in rural or urban areas. The rich and the poor, the literate and the illiterate are sure to welcome it if the Government make an intensive propaganda for its introduction. The authorities on family planning, the demographers and the sociologists even of advanced countries are unanimous on the point that oral contraceptive is the only acceptable family planning measure for all countries, not to speak of the so-called undeveloped countries, provided such a contraceptive is cheap and harmless.

How far this is acceptable in India is borne out by the fact that during a trial of two and a half years (from June 1953 to December 1955)[5,6] in Calcutta with m-xylohydroquinone in

capsules, to be taken orally twice every month, the number of patients went up to 950. Although such oral contraceptive was the first of its kind and never heard of before, still being acceptable to all classes of people, the number of interested subjects went up so high. During a subsequent trial by the Government of India under the aegis of the All-India Institute of Hygiene in Calcutta, the number has already come up to 600 during 13 months (from February 1956 to March 1957).

Not only so, this new oral contraceptive, m-xylohydroquinone, has already been proved to be harmless, producing no acute or chronic or cumulative toxicity[7] even after prolonged use. It is neither an abortifacient nor does it produce any permanent sterility.[5] Even in cases of failure, it produces no deleterious effect on the child born subsequently.[5] The cost of production is exceedingly low, to suit the purse of even the poorest villager. Administration is easy, only two capsules being taken on the 16th and 21st day of the cycle. To obviate this difficulty of calculation for those who are devoid of literacy, research is being conducted in this laboratory to modify the compound in such a way that it may be administered just after the menstruation is over.[8] Further research is also being conducted for additional improvement of the compound and also its stabilization. Already, some success in this direction has been achieved.

If the Government of India help a large-scale propaganda starting from remote villages, as has been done in the case of stamping out malaria with DDT, and the Central Government organize its manufacture on a large scale, it may be expected that in five years time the family planning movement will be on a sound and practical basis and in another five years, the resultant effect would be apparent. The Population Department of the Princeton University is of opinion that if a 50% reduction in the population growth can be achieved in 25 years, the developmental projects of India are sure to improve the economic condition by at least doubling the percapita income. That at least a 50% reduction in the pregnancies can be effected with this oral contraceptive, m-xylohydroquinone, as it stands now, is supported by the fact that in the trial with

this oral contraceptive in Calcutta by the Central Government, the pregnancies occurring in the treated group were 50% less than those of the control group receiving dummy capsules.[9]

REFERENCES

[1] Das Gupta, A,, Som, R. K., Mazumdar, M., Mitra, S.
1955 *The National Sample Survey*, No. 7. Indian Statistical Institute, Calcutta.

[2] Das Gupta, A., Mazumdar, M.,
1954 *Studies Relating to Planning for National Development: Population Projection.* Indian Statistical Institute, Calcutta.

[3] Lorimer, F.
'Dynamic Aspect of the Relation of Population-Crowth to Economic Development', *Bulletin of The International Statistical Institute*, Vol. xxxiii, pt. iv, p. 251.

[4] Davis,
1951 *Population of India and Pakistan*, pp. 89-90.

[5] Sanyal, S. N., Ghose, S.
1955 *Jour. Med. & Int. Med. Abs. & Rev.*, vol. 18, no. 5.

[6] Sanyal, S. N.
1956 *ibid.*, vol. 19, no. 1.

[7] Sanyal, S. N.
1955 *ibid.*, vol. 18, no. 2.

[8] Sanyal, S. N.
1957 *ibid.*, vol. 21, no. 1.

[9] Chandrasekharan, C.
Unpublished data.

ANNUAL FESTIVALS OF THE LODHAS OF WEST BENGAL

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(Received on 27th May, 1957)

Introduction

THE Lodhas are distributed mainly along the western part of Midnapur district in West Bengal. The majority of these people subsist on various forest produce or maintain themselves by working as day-labourers, while a good many have also taken to agriculture. Attempts have been made in this paper to describe the annual festivals of the Lodhas with special reference to their social and economic life, and note their variations from place to place. A large number of festivals are observed by these people. Some of them are connected with the worship of deities who, as they believe, protect them from natural calamities, while others are linked with their economic life. Lodhas generally believe in supernatural powers possessed by some of these deities, and they invoke their mercy and grace in times of natural calamities and for staving off pestilence and disease and for securing safety and prosperity of the individual as well as of the community. Again, for prevention of evil supposed to be inflicted by hostile spirits, magico-religious rites are performed either individually or communally through various ceremonies. During these rituals blessings are sought from ancestral spirits, the popular belief being that they are without any shape or form and hover in the air all around with a predisposition to help, if appeased and suitably invoked. When communication is established with these spirits, these benefactors of the families might even suggest specific remedies for specific situations which are believed to be infalliable. Sacrifices for the appease-

ment of these spirits as well as to the ancestors are generally offered in various ceremonies.

All information contained in this paper was collected during investigations made by the writer from 1952 to 1956, in the police stations of Kesiary, Dantan, Narayangarh, Nayagram, Jamboni, Gopiballavpur, Jhargram and Binpur. Almost all the festivals described were witnessed by the writer. Their territorial distribution and variations have also been noted in detail.

General Features

For worship of deities they have the D e h e r i or the priest and his assistant known as T a l i a appointed from within their own community. Some of the festivals are held on fixed dates, while others are observed according to local convenience. Agricultural festivals like Banipuja, Sarpuja, etc., are conspicuously absent in the jungle areas of Jhargram, Jamboni, Binpur, Gopiballavpur and Nayagram, while they are held in the other police stations by the Lodhas. A few of the festivals are performed on a family basis and sometimes conducted by the head of the family instead of the Deheri. B a n d a n a or the festival of 'cattle caressing' celebrated in the police stations of Jhargram, Binpur and Jamboni where the two neighbouring communities, the Mahato and the Kora, also perform the latter. The invocation and sacrifices are followed by music and dances. Some of the villages have permanent shrines, locally called M a r o or T h a n, for worship. Such shrines are very common in the police stations of Narayangarh, Kesiary and Dantan. Table 1 gives a list of the different festivals and worships celebrated by the Lodhas during a full calendar year, and Table 2 indicates the purpose of worship and the nature of the offerings.

TABLE 1

Calendar of festivals

Serial No.	Month	Festival	General features	Remarks
1	Baisakh (April-May)	(i) Sitala (ii) Yugini (iii) Baram (iv) Chandi	Communal basis, sometimes individuals also offer sacrifices.	
2	Jaistha (May-June)	(v) Manasa (Deity of the serpents)	Performed by a magician amongst the community.	
3	Asharh (June-July)	(vi) Asharipuja	Celebrated on communal basis.	Only in Jhargram P. S.
4	Sravan (July-August)	(vii) Jathel	Communal festival connected with agricultural operations.	
5	Bhadra (August-September)			
6	Aswin (September-October)	(viii) Asthamipuja (ix) Mansapuja	Communal festival Individual worship	
7	Karttik (October-November)	(x) Jathel (xi) Bandana	Communal Communal	
8	Agrahayan (November-December)	(xii) Banipuja (xiii) Lakshmi-puja	Associated with agricultural life ; performed on family basis.	
9	Paush (December-January)	(xiv) Baram (xv) Sitala (xvi) Chandi (xvii) Yugini	Communal	
10	Magh (January-February)	(xviii) Muchripuja (xix) Baram or Garampuja	Agricultural worship performed on family basis.	
11	Phalgun (February-March)			
12	Chaitra (March-April)	(xx) Natun Hanri or offering to the manes	Performed on family basis.	
		(xxi) Baram (xxii) Sitala (xxiii) Yugini	Communal	

TABLE 2

Festivals, with their purposes

Serial No.	Worship or Festival	Purpose	Nature of offering	Conducted by
1	Sitala	To escape from the scourge of epidemic diseases like cholera, small-pox, etc.	Elaborate worship with goat and fowl sacrifice	Deheri assisted by Talia and Hantakar
2	Yugini	do.	A black fowl is sacrificed.	do.
3	Baram or Garam	For welfare of the village	Fowl and goats sacrificed with votive offerings.	do.
4	Chandi	For protection of the village from the depredation of wild animals	Elaborate worship, goat sacrifice, a terracotta elephant is offered.	Deheri only
5	Manasa	To make snakes lose their poison	Elaborate worship. A goat or a nestling pegion is sacrificed.	Magician and his disciples
6	Ashari Parab	For welfare of the community	Only one such festival was observed, accompanied by sacrifice of a pig.	Deheri
7	Jathel	Before the commencement of transplantation and the first collection of tusser cocoons in the jungle	No sacrifice, boiled milk is offered.	Deheri
8	Asthami-puja	For welfare of the community	Worship of goddess Sitala during the eighth day of Durga Puja. No sacrifice.	Deheri
9	Bandana festival	Cattle worship on a communal basis	Cattle are bathed and garlanded, goat or fowl sacrificed.	Head of the family assisted by elderly female members
10	Banipuja, Sarpuja	Connected with the first and last reaping of harvest respectively	On family basis, no sacrifice.	Head of the family

Serial No.	Worship or Festival	Purpose	Nature of offering	Conducted by
11	Lakshmipuja	Goddess of wealth, on special occasions	On family basis, no sacrifice.	Head of the family
12	Muchripuja	Connected with agricultural operations. Only one such festival was observed.	Family basis, fowl sacrifice.	do.
13	Sraddha	Offering to the manes, for the welfare of the family	On family basis, sometimes the first fruits are offered. Fowl are sacrificed occasionally.	Head of the family

Distribution and Nature of Variation

Sitala : Sitala is the supreme deity having control over epidemic diseases like cholera, small-pox, etc. This worship is done communally and conducted by the Deheri. All the villagers pay subscriptions for the celebration. Goats and fowl are generally sacrificed. This festival continues for three to five days. In the jungle areas, there is no permanent shed or shrine for the goddess, but this is very common in the police stations of Narayangarh, Kesiary and Dantan. Dance and music are held at the time of worship. A few men seem to become possessed by spirits during the progress of the dance and music and shout in a queer manner. They are know as B y a k r a s. Their voices, when they speak in trance, are thought to convey the commands of the deity, and sacrifices etc. are made according to their dictates.

Yugini : Yugini is thought to be the attending maid of Sitala and is the custodian of the souls of persons who die from epidemic diseases. On the last day of Sitala worship, worship of Yugini is also performed by the Deheri in the outskirts of the village, where a black fowl is sacrificed. This form of worship is popular in almost all police stations except in a few villages of Jhargram police station.

Baram or Garam : He is the tutelary deity of villages inhabited by Lodhas. He resides generally high on a tall

s a l (*Shorea robusta*) tree. Sometimes some other tall tree, where a s a l is absent, is taken to be his abode. Elaborate worship is done communally almost in every village to propitiate Baram with the sacrifice of fowl. In one village, named Parulda, under the police station of Narayangarh, terracotta horses etc. are also offered to him.

Chandi : The Lodhas firmly believe that Chandi protects people from the depredation of wild animals like tigers and snakes. She is also in command of chronic diseases. She is worshipped almost everywhere in the Lodha country, and votive offerings like terracotta elephants are made to her. Sacrifices are also made to propitiate the goddess by the Deheri. The Deheri of Chandi is a priest quite distinct from the village Deheri of the Lodhas. There are a few famous Chandis in this region, such as, Joychandi of Pitalkanthi, P. S. Sankrail, Bhairabi Chandi of Dahijuri, P. S. Jhargram, Baram Chandi of Mamanasa, P. S. Narayangarh, Duasini Chandi of Kukai, P. S. Kesiary and Joy Chandi of Kadamdiha, P. S. Nayagram.

Manasa : Manasa is the deity of serpents. Only G u n n i s or O j h a s, that is, the magicians of the Lodha community perform her worship in different villages with the sacrifice of goats or pigeons.

Ashariparab : This festival is the solitary instance of a worship held in one village only named Mahischhar under the police station of Jhargram by a Deheri named Suren Mallik. He said that this festival is also called J a t h e l. Once he sacrificed a pig and fowl in a paddy-field, where the decapitated heads were buried and the meat was cooked with pounded rice. Women did not take the flesh of the pig. This was done, he said, to the deity presiding over the paddy-field for increasing the yield of crops.

Jathel : Jathel is widely observed almost in all police stations mentioned above, except in Jhargram, Binpur and Jamboni. The festival is held before the commencement of the first transplantation. Among the Lodhas of the agricultural

area, nobody is allowed to transplant his paddy-field or to plough for the second time on the nursing paddy-field till the festival has been held. If anybody does so, he has to keep apart a few annas in the name of Jathel to be spent during the festival In the police stations of Nayagram and Gopiballavpur, this festival is held before the collection of t u s s e r cocoons during September or October. No sacrifice is made, but an offering of K s h i r b h o g is prepared by the Deheri by mixing sun-dried rice, sugar and milk, cooked in a new earthen pot.

Bandana : This festival is mainly observed by the Mahato, Kora and Bagal castes. The Lodhas of Jhargram, Jamboni and Binpur police stations also celebrate the festival. It is held in acknowledgement of gratitude to cattle for the great help they render in agriculture. It is performed in three phases. The head of the family worships and sacrifices a goat or fowl in the name of the presiding deity as the case may be and distributes the flesh to his kinsmen or relatives. Songs are a dominant feature of the festival.*

Banipuja and Sarpuja : These are celebrated only by a few Lodha families in the villages of Parulda, Chakganka in the Narayangarh police station. Some of the villagers here said that this is in vogue also in Kesiary and Kharagpur police stations. It is performed by the neighbouring farmers of other castes also before the first and last reaping of paddy. As a mark of respect, the first bundle of paddy is reserved for the deity and stored in the thatched roof of the hut. In the same way, during Sarpuja, the last bundle of paddy is kept there. On both the occasions, cakes are prepared and on the last day of Sarpuja, agricultural implements are decorated with a thin paste of rice and vermilion.

Lakshmipuja : The worship of Lakshmi is performed by the agricultural Lodhas only in the police stations of Narayangarh, Kesiary and Dantan. On each Thursday of the month of Agrahayan and Paush (November—January), this ceremony takes place, when sun-dried rice and a small quantity of sugar

* Described in *Man in India*, 37, 1.

are offered to Lakshmi, the goddess of wealth. On that day, no one in the family eats fish or meat.

Muchripuja : This is an agricultural festival performed in the paddy-field just after harvesting has been completed. One Gourhari Kotal of Kukai under the police station of Kesiary celebrates it in honour of the spirits of the paddy-field. One red coloured fowl is sacrificed every year and its blood is sprinkled on a stone slab laid at the eastern boundary of the paddy-field. Later, the flesh of the fowl is dressed and cooked by him and served to kinsmen and relatives. The writer did not find this festival anywhere else.

Nutan Hanri *(New cooking pot)* **and Sraddha :** This is done on the first day of Baisakh (April—May) in many Lodha villages, specially in the Jhargram, Nayagram, Jamboni, Binpur and Kesiary police stations. Old earthen vessels of the previous year are thrown away and new earthen vessels are purchased and used on this first day of the year. Sometimes fowl are sacrificed in honour of the ancestors and the cooked meat is offered on a winnowing fan on the Isan or the raised earthen platform near the hearth. Sometimes, the first fruit of the season, like mango is offered in water to the ancestors. This festival is widely celebrated, and sometimes called Hanri puja, which literally means 'celebration of new earthen pots'.

Conclusion

The worships and the festivals of the Lodhas reveal the following features.

Lodhas claim that they belong to the Hindu community ; but no Brahmin priest, even low (degraded ?) Brahmins who act as priests amongst the Scheduled Castes, perform their religious functions. So they have no standardized incantation or mantra (formula) for the propitiation of various deities. They even sacrifice fowl to the deity Sitala, which is against the canons of worship among the Hindus. Baram or Garam is the diety of the jungle and is worshipped by the Lodhas like other tribes living in the same place. Chandi has been described

in various religious books as the deity of savages. Even so, she is worshipped in different ways by other Hindu castes and communities. A few festivals and worships are exclusively performed by the Lodhas and are prominent in different areas. Thus the Bandana festival is celebrated in the areas mainly inhabited by the Mahato and Kora, and Banipuja, Sarpuja and Laksmipuja in areas inhabited by the cultivating castes. Thus it can be said that in the worships and festivals of the Lodhas, the impact of the culture of the local Hindus is markedly dominant, the process of assimilation having varied to some extent from one area to another.

OBSERVATIONS ON 'THE EFFECT OF URBANIZATION ON WORK AND LEISURE'

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PROF. N. K. Bose's paper 'The Effect of Urbanization on Work and Leisure' (*Man in India*, 37, 1) was presumably limited in scope, being his presidential observation at a seminar organized at the instance of U. N. E. S. C. O. 'to make studies of the present state of the traditional arts and traditional uses of Indian literature in the community life of villages near Calcutta, etc.' He has however made certain observations in the paper which will be considered here in the light of facts furnished in the paper itself, and also in the light of the anthropological themes that one can reasonably construct through analysis of current knowledge about the problems dealt with in the paper.

Before entering into details, I should point out some of the vital drawbacks of the paper. Prof. Bose has not, for instance, defined what he exactly means by the terms 'urbanization', 'leisure' etc. According to the Population Commission of U. N. 'because of the diversity of conditions affecting the classification of areas as urban and rural in various countries, it is not practicable at present to establish uniform definitions of urban and rural population for international use'. It is thus apparent that there is no universally valid definition of the term, urbanization. Scientific precision would therefore require that the use of the term should be presaged by a clear statement of one's own concept. Prof. Bose has not thought it necessary. We are therefore left to infer what he has meant by urbanization from his treatment of the term in the paper.

At page 3 (2nd para), Prof. Bose has stated that 'urbanization is a material and economic phenomenon consequent upon change in our system of production.' This however seems to be an omnibus description and it may mean anything. It is left to one to imagine what 'system of production' is referred to and what

'the material and economic phenomena' are. One may ask, for instance, whether it is necessary to change from capitalist system of production to socialist system of production or vice versa to usher in urbanization ? Probing deeper into the lines quoted, one may further ask whether 'change in our system of production' itself is not a 'material and economic phenomenon' and as such whether the cause and effect relation as indicated by Prof. Bose can mean anything more than tautological use of a verbal image ?

Proceeding further, we find that Prof. Bose is of the view that 'new growth of social consciousness has been one of the results of India's contact with the West'. If read in the context in which the line occurs, it would appear that Prof. Bose considers the 'new growth of social consciousness in India' to be unconnected with the 'material and economic phenomenon' of India's urbanization ; but elsewhere, and again and again throughout the paper, he has tried to place all changes in India's social life under the fealty of her urbanization. I however think that the contradiction is only apparent, and has arisen due to the somewhat casual way in which Prof. Bose has dealt with the different concepts in the paper. I shall discuss the point later on. In the meantime, let us examine the concept of leisure and its relation to work and entertainment, so that we may treat the paper in its totality.

According to Ida Craven (*Encyclopaedia of the Social Sciences*), in common parlance and in general practice, leisure, the opportunity for disinterested activity, tends to become confused with amusement or recreation. For the purpose of social analysis she has defined leisure as 'freedom from activities centring around the earning of livelihood'. As it is always the person who enters into such activities, either in his individual capacity or as member of a group, the freedom, when there is freedom at all, is always personal freedom. Leisure therefore is always personal, both in industrial and pre-industrial society. Again it is also social ; as it is society that makes leisure available to individuals or groups of individuals in significant forms. When, therefore, Prof. Bose says that leisure in modern industrialized society has become more personalized, it is clear that he confuses leisure with something else. What he means is not however difficult to trace. His argument runs as follows, 'the neighbourhood of the city and the use of gramophone,

radio or the cinema offer a wider choice to the erstwhile villagers in the manner in which they can spend their leisure. In short, leisure becomes more personalized, while the range of choice in the matter of entertainment also becomes wider'. Clearly, he has confused leisure-time activity with leisure on the one hand and entertainment on the other. What he describes as personalization of leisure, is actually disorganization of organized community recreation and other leisure-time activities on the one hand and atomization and commercialization of leisure-time activities on the other hand. The process is shift from one complex whole to another complex whole and must not be swabbed truistically. To correctly apprehend the meaning of this shift, it is necessary to examine the relation between work, recreation and leisure through the ages. But we shall return to that later on.

We shall now discuss the paper from two aspects, firstly, the question of method and secondly, the conclusions arrived at by Prof. Bose. It is by 'a careful comparison made between a village (Amdabad) far from Calcutta with a small town (Panihati) in the neighbourhood of the city' that Prof. Bose has tried to draw out the effect of urbanization. Methodologically, it appears to be open to certain questions. Firstly, it may be noted that the comparison has been made on the basis of synchronical study of the two areas. This seems to imply that, but for some intrusion of urban ways as indicated by Prof. Bose, the pre-urbanization base-line can be drawn up at the folk ways observable at Amdabad. While the presumption may be more or less correct, so far as the technical order of urbanization is concerned, there is no evidence that it is correct for the social order of urbanization also. It should not be ignored that urbanization has a dual process of concentration of population in urban areas, and emigration of population from the non-urban areas under multiple motivations. This demographic reality in non-urban areas is not only the reverse side of urbanization, but also the factor for continued communication between urban area and its hinterland. It is therefore very difficult to accept that Amdabad of to-day has remained static in the same condition in which Panihati was in 1901 or so. In fact it has not ; and in fact even Prof. Bose has shown that it has not. But even then he has claimed that significant results can be obtained by careful comparison between

the two areas based on the synchronical study that was undertaken. May I submit to Prof. Bose whether a diachronical study of both the areas and comparison between the trends of change observed through such study would not have yielded much more satisfactory results ? But there is another question which can be pertinently asked in this connection. For study of the characteristics of urbanization, Prof. Bose has selected a small town in the neighbourhood of the city. But is it not more likely that such a small town in the vicinity of a city will have the characteristics of sub-urbanization to a considerable extent ? Is there any scientifically valid data to assume that the cultural and social role of a small town in the vicinity of a city will be identical with that of the city itself ? Or, again, is there any evidence that the social and cultural role of a small town in the vicinity of a city is identical with that of a town far away from the city ? Further, are we sure that the process and meaning of urbanization in an industrial town is identical with that of an administrative town in outlying areas ? On the face of it, it appears to be different. To use the terms of Redfield and Singer, though in a different context, urbanization in the former is of the technical order and urbanization in the latter is of the moral order. There is urbanization and urbanization. From the field report of Sri Bandopadhyaya, which follows the paper of Prof. Bose, it is clear that urban impact reaching Amdabad is of the second type, whereas urbanization of Panihati is of the first type. Hence these two cannot be directly compared in terms of processed and unprocessed specimens of urbanization.

Lastly, the most lop-sided aspect of the paper is that, though Prof. Bose has claimed that his conclusions are based on 'careful comparison' between Amdabad and Panihati, he has in fact made no comparison at all. At best what he has done is only serial description of segmental data of the two areas. But simple description can by no means be called comparison. Little attempt has been made to draw out the similarities and dissimilarities and analyze the underlying processes that manifest themselves through such similarities and dissimilarities. Significant facts simply remain studded in the two descriptions. For instance, we are told that there are nine clubs at Amdabad with a total membership of 1441. Much has been made of the increase in the number

of clubs and libraries on a non-caste basis in post-independence period, but no attempt has been made to draw out its significance in the light of trends observed at Panihati in the same field. It is only casually reported that there are only two clubs at Panihati, one established in 1914 and the other in 1950. There are also two or three organizations of special type. It is strange that it did not strike significant to Prof. Bose that Panihati with more than ten times the population of Amdabad has so few clubs, as against nine at Amdabad. It is difficult to see, how on the face of this information, Amdabad is under impact of the same process of urbanization as has taken place at Panihati. Again, from the growth in the number of amateur theatrical performances at Amdabad, Prof. Bose has claimed that the people have taken upon themselves the responsibility of offering entertainment to their neighbours. But if it were under impact of urbanization of the type at Panihati, we would have found the trend in more intensified manner at the latter place. But do we find it actually ? Unfortuantely the data furnished are quite inadequate for any comparative study. Incidentally, popularity of cinema has been mentioned, both at Amdabad and Panihati. Is it a phenomenon of the same order as theatrical performances ? Does it flourish because 'the people have taken upon themselves the responsibility of offering entertainment' ? Most emphatically, it is not. It is just the negation of what Prof. Bose has claimed. Cinema flourishes as commercialized leisure-time activity because people have no leisure to organize their leisure-time activity. People exhausted by eight hours of labour under the rush of modern industrialized society, are too exhausted and suffer too much from the strains of insecurity to have any real leisure.

Let us now examine the other conclusions or rather observations, as Prof. Bose would perhaps prefer to term them, and see whether they cannot be interpreted in a different way in the light of the factual data furnished in the paper.

Taking up the factual data first, let us consider the following one by one.

(1) While in agricultural society work and leisure are more or less seasonably distributed, in industrialized society these are no longer seasonably distributed, but different classes of workers have their work and leisure spread out in different ways all through

the year. The neighbourhood of the city and the use of gramophone, radio or cinema offer a wider choice to the erstwhile villagers in the manner in which they can spend their leisure.

It is true that in agricultural society work and leisure, or rather as analyzed before, recreational activities, are more or less seasonably distributed, but it is only a partial truth. There is another facet of the truth. It is that in agricultural and other pre-industrial societies, work and leisure were very frequently inseparably interwoven. Productive activity was not carried on for eight hours or so under nerve-breaking high speed. It was distributed throughout the day, and so was also recreation distributed throughout the day. The farmer would sing while ploughing the field or his friend would unravel the charm of a fable while plying the boat. The dichotomy between work and leisure was not as sharp as at present. When economic activity did not disenfranchise man of his personality, except perhaps in case of slave labour, all social communications, including organization of work, was at human level and recreation was automatic. The seasonal recreative activities were by no means break with daily process but only denouement of the process in an increased tempo. To-day the break between work and leisure is complete or in other words the break between work and man and leisure and man is complete. Work is carried on in conditions that hardly give any mental, moral or spiritual satisfaction to our human personality and when we come out of the work—the fatigued, shattered, and incomplete man,—we hardly have any energy left to refashion our personality, or to re-organize our spirit. Even our free time is battered with hovering insecurity. This, along with lack of space, bad transport and unhappy home makes leisure an ever-eluding damsel. Our first urge is to escape ; and we become easy victims of self-dissipating commercial entertainments. This is the grim reality of what Prof. Bose has described as 'personalized leisure' of industrial society. Not that this is the whole of the reality. Side by side, another trend, trend towards conscious socialization of leisure, rather than socialization of labour, is also gaining momentum. If it be a characteristic of modern times, it is not in direct response to industrialization but it is continuation of much older tradition of man, which has perhaps gained momentum and a new significance to meet the challenge created by industrialization. Prof.

Bose has also referred to it as 'growth of social consciousness', but he has not taken trouble to trace its root. As such the significance is entirely lost sight of.

(2) Turning back to Prof. Bose, we find 'even in distant peasants' village, there is considerable competition between the old and new types of entertainment. The y a t r a, or stageless theatre of the old type run by professional companies, and the songs sung in accompaniment with coloured, hand-painted rolls of picture prepared by hereditary caste of bards, are giving place to amateur theatrical clubs. When people take upon themselves the responsibility of offering entertainment through theatres to their neighbours, they no longer depend on traditional castes, but do it themselves ; while even the dramas of old are re-cast more in accordance with the new spirit of the age, which is the spirit of humanism, the villagers seek to urbanize themselves, while interests become more secular and less religious in the old sense of the term.'

As noted by Prof. Bose, assertion, rather re-assertion of the spirit of man is a significant trend of modern age. But what is the evidence that it is a necessary concommittant of urbanization ? In fact, as noted earlier, Prof. Bose himself has visualized it in one place as a separate process. He has tried to relate it to India's contact with the West. In other words, the humanistic trends are not the direct outcome of the economic forces of industrial civilization or urbanization in the narrow sense of the term. If they were, we should have found them in more intense form at Panihati. But we find very little indication of that at Panihati. But again seen in a different way these trends are somehow linked with the moral order of urbanization, in the broader sense of the term. When Prof. Bose says that 'the villagers seek to urbanize themselves', he apparently and very aptly means this moral order. But he, as well as many other social scientists including Redfield, are mistaken to equate it with the westernization or europeanization of the world.

Let me offer an alternative working hypothesis. If we study the history of nations, we shall find that, side by side with sophistication of the elites, there is always a submerged humanism which has kept the flickers of progress burning. History of revolutions is the history of human spirit asserting

against its negation. Humanism therefore is not the unique distinction of any geographical area, but it is the part of a larger heritage of every human group and ultimately of every human individual. Coming over to the field of social engineering, it is only in recognition of this truth, that Gandhiji's teaching can be appreciated in its right perspective. The biggest achievement of the modern age is however that, through mastery of the facts of nature, man has become conscious of the above fact of human history. In other words, humanism of to-day, has attained the maturity to free itself of the transcendental sanction of the previous ages. Man has become his master in his own right. As such, a new element has entered into human history, the element of consciously assorted values leading towards universalization of human institutions. If this assortment is based on empirical experiences of mankind, it is nevertheless far away from the a-moral pragmatism characteristic of the period of spiritual crisis that splashed over the technic-ridden civilization of the West. Not that we are out of the wood, but through the shock-therapy of the two world wars, the conscience of man has been shaken to a new beginning of the journey towards one world. If 'will to power" in Adlerian sense, which I would prefer to restate as blind urge for security, was the primary motivation in all human involvements in the dark ages of our ignorance, the ethics as well as the aesthetics of striving after universal categories is the characteristic of our shattered enlightenment. It is natural that metropolitan cities of different countries, with their diverse contacts and with their networks of intellectual and academical pursuits will be the nucleii of the new trend of universalization or cosmopolitanism to-day. Hence even though thus cosmoplitanism is the common heritage of all, its processing having taken place in the metropolis generally, it has come to be looked upon as a concommittant feature of urbanization. But it is clear that the linkage is only incidental and not essential. The root of universalization is not in the technical order of urbanization, but in the moral order of sociation itself. Hence even though the metropolis may be the vanguard of the new trend, the hinterland is not the helpless victim of the inexorable logic of the process giving shape to the trends, as in the case of the technical order of urbanization. In this case, the hinterland is a purposive conscious participant. Thus

in the moral plane, a completely new type of relationship grows up between the urban centre and the rural hinterland. The urban centre is no longer the spearhead of disruption but the focal point for filteration of man-made institutions so as to allow the greatest possible liberty, dignity and sanctity of the human individual. Redfield and Singer have hinted at the probability of orthogenetic role of colonial cities as a result of their being arsenals of nationalist revival (*Man in India,* 36,3). They are correct, but they have failed to recognize the whole truth. Nationalist revival is only one dimension of the orthogenesis ; but there are other dimensions. Cosmopolitan humanism is one of them, and looked at from that plane all metropolitan cities of the world are likely to play convergent orthogenetic roles. One may however be piqued whether multiplicity of orthogenesis can be called orthogenesis at all. To me, at best, it is an epistemological dilemma. When we speak of universalization we speak of universalization of values emergent through cumulative empirical experiences of mankind as a whole. But this need not preclude local milieu and local form in manifestation of the universal ; rather it is in the light of the universal that the local has come to its own. Progress to-day is no longer conceived of as blind imitation of alien forms ; but initiation into greater values. Co-existence of the universal and the local is the refrain of modern civilization. I have described it elsewhere as moral order ; but I have a vague suspicion that in the present phase of transition we have an ambivalent attitude towards both. In any case, what I have elaborated above, being only an intellectual construct, the validity of which requires to be established or disproved by painstaking field investigation, we need not give way to further speculation here.

Now turning back to Amdabad, let us try to understand what has taken place or what is taking place there. Simultaneously, let us consider the developments at Panihati. For this purpose, let us re-organize and restate the facts. (1) While at Amdabad amateur theatrical clubs or libraries punctuate their normal activities with social services of various kinds, in the post-independence era, no such activities have been reported for the clubs at Panihati. There are however three Pallimangal Samitis, connected with three refugee colonies, which undertake social service in their respective areas ; there are also specialized agencies set up by the Government.

Significance of the above facts has already been discussed to show that growth of 'social consciousness' at Amdabad has nothing to do with the economic fact of urbanization. Its root lies in universalization of the world. The trend may have been earlier felt at Amdabad, because the basic unity of the agricultural population of Amdabad, offers a more congenial field for its consolidation. In the city proper, the people have another unity of cultural level, the word 'culture' being used here in the sense of ideational refinement. Suburban area, on the other hand, tossing between the social and economic processes of the city and hinterland, and without having the stabilizing influences of either is more likely to lose its balance in dissipation and disruption. But basic unity of the agricultural civilization by itself is not sufficient ground for humanistic trends to flourish at Amdabad ; in that case, every village of India would have been seething with it. There are other facts. The most outstanding one is that Amdabad is a fairly large village with a population of over 4,000. All interpersonal communications cannot therefore be of primary nature ; on the other hand, people cannot be too distant from one another socially and otherwise, to make all communications between any two individuals to be of purely secondary nature also. It may be anticipated that social services cannot grow if communication be of primary nature only. In that case what flourishes is family service or inter-family co-operation or institutions of the similar order. Again, if communication be of secondary nature mainly, social service as a comprehensive programme cannot easily come into existence. What flourishes is specialized services to cover limited fields of contact only, as in the case of the labour welfare centre at Panihati. But diversity on the plank of internal unity is not the whole of the social situation at Amdabad. There are other factors, the most important of which is participation of the richer peasantry in the struggle for national liberation. It is through the crucible of freedom movement that new experiences and new institutions took their root in the congenial field of Amdabad ; and the post-independence phenomenon of increased social consciousness is the efflorescence of that. The whole process can scarcely by covered under the rubric of 'effect of urbanization'.

(2) Prof. Bose has made another untenable claim, viz., that increasing participation of the villagers in their own entertainment has

led to the progressive decay of the professional castes connected with entertainment. One aspect of the fallacy of the statement has been discussed earlier. But there are others. Under the term entertainment, Prof. Bose has included reading of sacred scriptures or performance of religious rites. Unfortunately no comparative data have been furnished on the basis of any diachronical study to show actual decrease in reading of sacred scriptures or performance of religious rites. Even if such decrease actually takes place, it is very difficult to appreciate how amateur theatrical performances can be responsible for it. Another form of entertainment described by Prof. Bose, is exhibition of scrolls accompanied by songs from the Bengali R a m a y a n a, M a h a b h a r a t a, B h a g a b a t a and M a n g a l K a v y a s. Apparently the entertainment offered by the Patidara minstrels is of a religious character. Hence decay in their profession is more likely to be connected with people's changing attitude towards religion or concept about religion. It may further be remembered that though the Patidara minstrels sing verses about Hindu gods and deities and culture heroes, they profess to be Muslim in religion. In this connection, it is pertinent to note the following significant facts about them which have not been mentioned in the report.

(a) After the partition of the country there was movement by a section of the people to boycott Patidaras on the ground of their religious affiliation to Islam. In the trail of this movement a few people from the Mahisya caste took to the supplementary occupation of image-making which was previously the monopoly of the Patidara caste. Even the report has made a mention of this latter fact ; but no attempt seems to have been made to draw out its significance. Now, cannot the decay of the scroll exhibition and associated songs be a direct outcome of the above boycott movement ?

(b) In that period there was a s u d d h i or purification ceremony through which many Patidaras were converted to Hinduism. But after the period of communal insecurity was over, a situation of tension arose within the community itself. One faction wanted to revert to the fold of Islam, another faction wanted to continue their new affiliation to Hindu religion. Diametrically opposite extremist movements cropped up. Some people prescribed behaviour in conformism with orthodox tenets of Hinduism and again there

were some who took to the orthodox tenets of Islam. I have not made field investigation in any detail, but I have a vague suspicion that decay in the profession of the Patidaras may not be altogether unrelated to these divergent reform movements and internal conflicts.

Another form of entertainment mentioned by Prof. Bose is y a t r a or stageless theatre of the old type run by professional companies. Decay of this is also ascribed to people's taking upon themselves the responsibility of offering entertainment through theatres to their neighbours. I feel that the professional and non-professional character of y a t r a and amateur theatre respectively has been overdrawn. In any case, this is not the most important difference between the two. If y a t r a was professional, it was rarely commercial. It requires to be established through statistical and other data, that profit was the main plank of the y a t r a parties. Ordinarily these y a t r a s used to take place during different religious and ceremonial occasions. There were elaborate social codes connected with performance of the y a t r a s and professional character was only incidental part of it. I suspect that payment rarely went beyond bare maintenance of the party, during the period of the performance and also during the period of preparation. When we remember that during the performance, the actors were billeted to different families, the social root of the y a t r a s becomes too apparent to be stamped as purely or even mainly professional. As a matter of fact, I have myself participated in y a t r a s in East Bengal and North Bengal, performed by purely amateur parties. On the other hand, monetary transaction takes place even in amateur theatres. The report of Sri Bandopadhyay shows that theatrical performances at Panihati were financed by local people. It does not appear that any tickets were sold but even if performance took place by sale of tickets, the amateur character need not necessarily be lost. Tickets may be sold to meet the cost or for the purpose of charity, etc. But again there are theatres, specially in the metropolitan cities, which are purely commercial ventures. It is therefore not very safe to generalize in a single sweep.

Now coming to the question of direct participation of the people in theatres and non-participation in y a t r a s, the facts of the situation scarcely seem to justify the claims of Prof. Bose ; rather the reality seems to be just the reverse. Let us consider who constitute

the actors in the y a t r a s. Unfortunately details have not been furnished in the report. But of one fact we are sure, and it is that they need not necessarily belong to any single caste. Therefore just as in theatres, there was no caste basis of the y a t r a s also. So far as we know, the actors belonged to the educated, half-educated or un-educated country folk with necessary talents. They drew their inspiration from the folklores. They were by no means differentiated from the people and through them the whole participated vicariously in the performance of the y a t r a s. Not only that, the people participated more directly. During the performance, there was definite code regarding sitting arrangement, there was definite expectation regarding manifestation of the people's appreciation in established patterns and after the performance, the ripple of it continued to affect every home by way of recital of choicest parts or singing of favourite songs. Not that some of these phenomena are lacking in modern theatres, but one should not lose sight of the important fact that the actors of these theatres belong to altogether different class. They are generally adolescents, from a bit better-off families, with some education. They do not belong to the common mass. With struggle for existence becoming much harder, the common peasantry has little leisure to directly organize the recreational performances. There is also hardly any leisured class in the villages to-day, who can carry on the tradition. The initiative has naturally passed over to the adolescents, who have still to undertake the burden of earning livelihood. They however form an altogether different entity. Through them the onus for providing entertainment has passed over from the community, as a whole, to a segmental entity. But this is only transitional phase for growth of commercialized entertainment on the one hand, emergence of cultural elites towering over the society on the other. There is therefore no justification to conceive that under impact of urbanization the people take upon themselves the responsibility of offering entertainment to their neighbours. If there be deviation from traditional practices, these deviations are cumulative effects of multiple factors, some of which I have tried to indicate. There must be other factors. But let us not anticipate them. Brilliant speculation is no substitute for scientific validation. Prof. Bose can certainly guide us to the latter task, if he wills.

MISCELLANEOUS NOTES

RURAL REHABILITATION

Rehabilitation and relief work are two quite different aspects of a social programme, the former being of a permanent nature. Rehabilitation calls for providing proper facilities for placing the beneficiaries on a sound economic footing, with special reference to their peculiar needs. In order to achieve full effect in this regard, different problems have to be studied in detail before finally deciding upon a scheme for implementation.

The Lodhas are a group of tribal people, so long regarded as a 'criminal tribe', whose problem of rehabilitation is now being tackled by the West Bengal Government. They are mainly concentrated in the western part of Midnapur district. These people are mostly landless, with very little practical knowledge of agriculture. As a result, their rehabilitation presents a comparatively difficult problem than in the case of landless agricultural labourers who have lost their land on one account or another. However, the Central and State Governments are trying jointly, at the moment, to rehabilitate them in congenial surroundings and on a sound economic basis. But to do so, a comprehensive scheme has to be formulated and put into effect with all earnestness, covering the basic needs of economy and social welfare. From my experience of local conditions and a detailed study of the different aspects of the social and economic life of the Lodhas, provision of the following appears to me to be of importance and calls for immediate attention, if any tangible results are to be obtained.

(i) Provision for supply of sufficient food to the people. Arrangements should be made to give them a balanced diet (2840 calories per day per adult) which is the minimum required to maintain normal health. For this purpose availability of land, its outturn of crops and the ways to further increase the yield should be studied.

TABLE I

Village Dahaipur
P. S. Narayangarh
P. O. Phulgeria
Dist. Midnapur

No. of Lodha families.	Population					Agriculture		Barga land		Cash earning for for one year
	Male		Female		Total	Total land owned	Total output	Cultivated	Output	
	0-15 years	16 plus	0-15 years	16 plus						
28	35	41	56	20	152	11 acres	120 mds. of paddy or 6500 lbs. of rice	22 acres	112 mds. of paddy or 6000 lbs. of rice	Rs. 625/-

(ii) Provision of utility and protective clothing at 25 yards per capita per annum in the minimum.

(iii) Provision of basic sanitary arrangements and propagation of hygienic habit.

(iv) Spread of education and provision of recreational facilities.

(v) Proper employment, best utilization of free time for productive purposes, setting up of cottage industries and village co-operatives.

Besides, other measures may be taken up by stages as and when necessary.

Let us now take the small Lodha village of Daharpur as a sample to examine what are the special needs of these people. This village is a constituent unit of the police station of Narayangarh situated about a mile away from the railway station of Narayangarh. In this village, there are altogether 28 Lodha families, the total poulation being 152. Table 1 provides information about their economic condition.

Of the 28 Lodha families, 17 are completely landless. The table shows that the Lodhas of the village of Daharpur own only 11 acres of cultivable land. Besides this, 22 acres of land are cultivated on the b a r g a or share-cropping system, i.e., half of the produce of this land is taken away by the owners and the other half is shared by those who actually cultivate it and bear the agricultural expenses. The total cash earning is about Rs. 625/- for the whole village, in which both the males and the females have their share according to the labour put in by them. Earnings from other sources are negligibly small, although a little money is made by sale of forest produce or by work in the construction of village roads under official auspices or in the local rice mills. Due to the casual nature of such employment, and being deprived of the ownership of land, these people are extremely poor, famished and almost naked.

Table 2 is a chart for balanced diet as could be had under village conditions in India.

TABLE 2

Recommended balanced diet per day per adult

No.	Items	According to J. C. Kumarappa Weight in Oz.	Calories	According to National Advisory Committee W. R. Aykroyd Weight in Oz.
1	Cereals	16	1600	14
2	Pulses	2	200	3
3	Green vegetables	8	48	4
4	Other vegetables	—	—	3
5	Root vegetables	4	100	3
6	Fruits	4	69	3
7	Milk	12	240	10
8	Sugar or jaggery	2	200	2
9	Vegetable oil, ghee etc.	1	255	2
10	Nuts	1	145	—
11	*Fish and Meat	—	—	3
12	Eggs	—	—	1

For the calculation of the total requirement of this village, 100 adult units have been taken (as the total number of grown-up people is 41 + 20 = 61 and 91 under-aged taken as 39 adults, these together adding up to 100). Hence the total requirement per annum for the whole village of 100 units, compiled according to the Aykroyd formula will be as follows :—

*According to Kumarappa, for non-vegetarian diet, 6 ozs. of milk may be substituted by 4 ozs. of meat or fish and 1 egg per day.

TABLE 3

Total food requirements

No.	Items	lbs. per head	For the village of 100 units in lbs.	Total production of rice in lbs.
1	Cereal	320	32000	12500
2	Pulses	69	6900	
3	Green vegetables	91	9100	
4	Other vegetables	69	6900	
5	Root vegetables	69	6900	
6	Fruits	69	6900	
7	Milk	228	22800	
8	Sugar and jaggery	46	4600	
9	Vegetable oil, g h e e etc.	46	4600	
10	Nuts	—	—	
11	Fish and Meat	69	6900	
12	Eggs	365	36500	

Actual figures for other items of consumption are not readily available. But it may be said that the Lodhas generally consume some kinds of roots, vegetables, pulses and fish, although the stock of eggs and meat are sold out for cash to procure other necessaries. Five families have six cows, but the milk is sold for cash instead of being consumed at home.

Land distribution and requirements : 152 persons constituting the total population of the village own 11 acres of land, which means a per capita possession of 0·072 acres. Kumarappa computed the figure of 0·7 acres of cultivable land available per head for food production. Though it is inadequate, he was of opinion that it would suffice to meet the requirements under the present mode of cultivation, if the system of land distribution and agriculture are completely reorganized. The farmers should be allowed to grow only certain types of crops to meet their primary

requirements of food where intensive cultivation and better manuring will be the guiding factors. After meeting their own requirements, they can produce other cash crops which would fetch money to pay for any other requirements.

According to this basis, this village requires 0·7 – 0·072 = 0·628 acres more of land per head, that is, a total of 95·456 acres. Taking into consideration the land under share-cropping, that is, 22 acres, which actually yields crops equivalent to 11 acres, the net requirement will 84·456 acres for the whole village.

We give below in Table 4, the present rate of expenses for cultivating one acre of land in this locality. If land is made available, the necessary capital has also to be found, so that the rehabilitated Lodhas can derive the full benefit out of changed circumstances. This has, of course, to be attended by education in the preparation and use of manures obtained by composting etc.

Excavation of tanks, filling up of low lands, poultry raising, pisciculture, t u s s e r cocoon cultivation and some cottage industries, like hand-pounding of rice and ropes and mat-making, etc. may also be adopted as supplementary sources of income. Village co-operatives have to be established for marketing the products.

But it is not even possible to allot this minimum per capita requirement of land to individual families unless the State Government changes its land policy and makes it easy for the actual tillers to obtain land where they can work freely. If this is done, the available land will meet the local requirements. Cereals as well as vegetables may be grown on this land alternately according to their food values.

TABLE 4

Present agricultural expenses per acre

No.	Human Labour	Animal Labour	Seed	Repair of Implements	Rent	Manure
	Rs.as.p.	Rs.as.p.	Rs.as.p.	Rs.as.p.	Rs.as.p.	Rs.as.p.
1	Ploughing 8 days @ -/9/- per day 4 8 0	8 days 2 bullocks 4 8 0	20 seers of paddy 5 0 0	8 0 0	Rent 4 0 0	40 baskets 6 0 0
2	Transplanting 8 days @ -/10/- 5 0 0					
3	Weeding 2 days @ -/8/- 1 0 0					
4	Harvesting and stacking 6 days 3 12 0					
5	Separation of paddy, straw etc. 4 days 2 8 0					
6	Miscellaneous 2 days 1 4 0					
	18 0 0	4 8 0	5 0 0	8 0 0	4 0 0	6 8 0

Total=Rs. 46 0 0

General outturn (if weather is favourable) :

Paddy	... 11 mds.	...	(Rice 588 lbs.)	
	@ Rs. 10	=	Rs. 110	0 0
Straw	... 4 kahans @ Rs. 2-8-0	=	Rs. 10	0 0
			Rs. 120	0 0

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BOOK REVIEWS

Science and Civilisation in China, Vol. 2, **History of Scientific Thought**, *by Joseph Needham, F. R. S., with the research assistance of Wang Ling, PH. D. Pp. 696. Cambridge University Press. 1956.*

It is impossible, and would be highly improper, for a layman in Sinology, to criticize this masterpiece of research. The 64 pages of bibliography (including 25 pages of Chinese books) bear witness to the fact that all available material has been consulted. An index of 41 pages makes reference easy. No student of comparative science, philosophy or religion can afford to ignore this book, let alone the Sinologists. The Cambridge University Press has given this volume a get-up worthy of the contents.

C. Bulcke

The Evolution of Man, *by Fr. M. Hermans. Pp. 139. The Society of St. Paul. Allahabad. 1955.*

The author being a Christian priest believes that man has been created by God and he says, 'The genotype of man proves that man is a special creation', and with this fixed end in view he has selected data and has come to conclusions which are not convincing to scientists. By analyzing the pregnancy period, the language development period, the puberty period, the intelligence and size of the brain of the great apes and man, the author has tried to show that the biogenetic development of the two are entirely different, and immediately he jumps to the conclusion that this does not admit of the evolution of man and apes from a common ancestor.

A. B. Saran

The Travels of Fa-Hsien (399-414 A. D.) or Record of the Buddhistic Kingdoms, *Re-translated by H. A. Giles, M.A. LL. D, 2nd impression, Pp. 96. Routledge & Kegan Paul Ltd. London E. C. 4. 1956. 12s. 6d.*

The long-felt want of students of ancient Indian history and religion has now been filled by the publishers after many years. The translation by Dr. Giles of the famous travels of Fa-Hsien is too well known to students of Indian history and needs no introduction afresh. The book has a list of terms as used by Fa-Hsien with

their meanings in English. The author has given with a wealth of interesting details a running description of Buddhist kings and their kingdoms, the way in which Buddha was worshipped and all stories connected with Buddha's life and the erection of s t u p a s on the sites of Buddha's activities during his life and preachings, as seen by Fa-Hsien himself during his travels. The map given at the end of the book showing the route followed on land and sea by Fa-Hsien in his travels is indispensable to readers. The three notes from pages 82 to 88 by different Chinese authors of the period about Fa-Hsien's travels and the chapter from the descriptive catalogue of the Imperial Library published in 1795 are of great interest to students of history.

The book is intensely interesting from cover to cover.

B. C. Roy

Man in Search of His Ancestors, *by Andre Senet. Translated by Malcolm Barnes. Pp. 274. George Allen and Unwin, London, 1955. 21s net.*

The book is divided into three parts under the titles, 'At the Cradle of Humanity', 'Our Ancestors the Fishes' and 'The Why and How of the History of Life'.

In the first part, the author briefly discusses the history of prehistory from the time of Casimir Pacard and then he gives a critical analysis of contributions of Boucher de Perthes, Charles Lyell, Cuvier, Lartet and others. Of these, Casimir Picard, Boucher de Perthes and Lartet were by different rights the real founders of the science of prehistory. But it is to Lartet that we must give the credit of having been the first to trace in a systematic way the framework within which the evolution of humanity proceeded. Senet has also analyzed the physical features of different living and fossil anthropoid apes. We also get an idea of palaeolithic men, their tools and weapons and arts and culture.

In part two, of more interest to zoologists than to anthropologists, Senet has discussed the life and physical features of fishes and reptiles, and how far they can be considered as our earliest ancestors.

In part three of the book the author has examined the evolution of the living world with reference to Lamarck's and Darwin's theory of evolution. Both Lamarck and Darwin aim at the same thing, but their way of approach is a little different.

On the whole it is an interesting book. Over a hundred illustrations and a dozen charts adds to its utility.

A. B. Saran

The Bhils, *by T. B. Naik. The Bharatiya Adimjati Sevak Sangh. Kingsway, Delhi—9.*

The Bhils are the largest of the tribes of western India. In numbers they come only after the Gonds and the Santals. It is a pity that there was no monograph on the Bhils in English, though there were numerous stray references about them in books of history and literature dealing with that region. The Bhils are dispersed over a wide area in Central India, Rajputana and Gujarat. The present work deals with the Bhils of Rajpipla and West Khandesh. If fills an important gap in the ethnographic map of the country.

The Bhils have posed a problem for Indian anthropologists. They do not form a group which is linguistically, culturally and racially definable. Nevertheless all people called Bhil have the consciousness of unity. Earlier, Professor Wilhelm Koppers gave an account of the Bhils of Central India in German. Dr. Naik's work on the Bhils of another region may help in a comparative analysis of the Bhil problem. Lately some regional studies have been taken up on the Bhils living in other areas, but the results have not been published so far.

Dr. Naik in this study gives a complete all-round picture of Bhil culture. All aspects of life have been touched upon. In the preface he was promised a larger work on Bhil social structure in which he hopes to discuss family, kinship, clan and village organization. Professor Koppers held that the Bhils believed in one High God, a supreme omnipotent and omnipresent deity called B h a g w a n. He does not mention the other numerous village deities and minor godlings. This has resulted in the impression that the Bhils believe in Bhagwan as the supreme deity, which is obviously not borne out by Dr. Naik's evidence. All the lower Hindu castes living around the Bhils apply the epithets which Koppers quotes for B h a g w a n of the Bhils. Actually there is not one high god but several high gods, chief among them being Raja Pantha, Vina Deo, Mata Pandhar, etc. The Bhils have, of course, no hierarchy of their deities.

Dr. Naik's book has been enriched by a detailed account of Bhil mythology, a description of their language and specimens of their oral literature. This has been due to his mastery of the Bhil dialect. To this may also be attributed his intimate knowledge of the people and of their problems. The importance of learning a tribal language before going to the field cannot be over-emphasized.

The last chapter dealing with the Bhils in transition may have been treated at greater length in view of the importance of culture change in current anthropological literature, and also for its bearing on the problems facing the Bhils. Dr. Naik dwells on the evils of contact with cultures which the Bhils have undergone for many centuries past. Their tribal organization has disintegrated and they seem to have lost the joy of living, as also the courage to live on. It may be expected that in such a sorry state of affairs their population may be diminishing or, at any rate, increasing at a slower rate. But as this is not the case it seems that the disintegration has already given place to re-integration of the Bhils with their changing social milieu. The Bhils like most of the agricultural tribes of Bihar seem to have a great capacity for readjustment with changing conditions. The latter have not lost their zest for life either.

Sachchidananda

The Judicial Process among the Barotse of Northern Rhodesia, *by Max Gluckman. Manchester University Press, Manchester, 1955. 37s. 6d. nett.*

The present work is the first of three books dealing with Barotse law. The other two books are *The Role of Court in Barotse Social Life* and *The Ideas of Barotse Jurisprudence.* While earlier authorities dealt with the law of the people they were describing, only in passing, or gave their theories without substantiating them, Professor Gluckman has given here not only his own important conclusions but also furnished a detailed analysis of the facts on which he has worked. 'Here, for the first time, we have a case book of early law giving us in detail the evidence produced at the trials and the judgements of the courts. We can therefore watch a primitive legal system in action and can follow the mental processes of the various judges' (Prof. A. L. Goodhart : Foreword, p. xiv).

The book deals with the law and courts of the Lozi, who are the ruling community in Barotseland in Northern Rhodesia. The Lozi established a kingdom in the middle of the 18th century and extended domination over many surrounding tribes. They have for at least two centuries a state organization including a hierarchy of courts with power to enforce decisions. Even though the country came under British Protectorate the native law courts continued, the paramount power only concerning itself with cases between natives and whites. Lately Barotse courts are not allowed to take up cases in which death is involved or cases of witchcraft except with special permission. They have lost the power to inflict certain punishments and remedies including death penalty, throttling and unlimited flogging, but they have acquired the power to imprison, a practice unknown in the past.

The system of law and courts is not studied in isolation but against the background of the complex social system of the Lozi. Gluckman has given a lie to the earlier assumption of the savage's automatic obedience to rules and customs. The Lozi are a litigious people. They are ready to rush to court where they dispute with great bitterness and determination. Every Lozi of middle age can recount dispute after dispute in which he has been involved. A dispute provoking a lawsuit precipitates ill feeling about many trifling incidents in the past both between the parties and among their kin. It is the function of the k u t a or the law-court to soothen ruffled feelings, but not without blaming those who have been wrong.

Professor Gluckman's analysis of the nature and definition of law is refreshing. The Lozi use their word for law, M u l a o, with many different meanings. It covers a body of rules of right doing, regularities of nature, particular judgements and statutes. Other meanings derive their significance from the order which ought to exist in nature and society. They have a clear conception of law. They constantly assess the judgements of their k u t a s against law as a body of rules. Law is defined by the Lozi themselves as 'things which ought to be done'. In more precise and technical language Gluckman defines law as 'a set of rules accepted by all normal members of the society as defining right and reasonable ways in which persons ought to behave in relation to each other and things including ways of obtaining protection for one's rights.' There may be no sanction behind a particular rule. Courts may

not enforce it, but nevertheless the obligation is recognized as law. 'Sanctions and enforcements are not essential to define law in this sense, as a corpus juris : all societies have it.' Law is different from morality in that law defines right and reasonable ways of acting and that the ways of morality are right and generous.

The rules embodied in the tribal social code are flexible. It is this flexibility which has enabled Lozi law to adjust itself to the changing social environment. 'Reasonable' and 'customary', like other legal concepts are highly flexible. They become imbued with changing social values and conditions of life. So the so-called ambiguity of the legal concepts constitutes the strength rather than the weakness of the legal system. The reasonable man plays an important role in the Lozi legal system. The standard of reasonable and customary behaviour has importance as a technique for arriving at the truth. In adjudicating on disputes the judges draw upon the principles of equity, justice and morality. The Lozi distinguish between laws of God and laws of mankind. They also recognize the 'Law of Nations' being those rules and institutions which are common to all African tribes of the region. The distinction between law and custom or the relation of law and religion is resolved if we see that law has the same material sources everywhere.

Gluckman's analysis bears out Maine's dictum that the movement of progressive societies has hitherto been a movement from Status to Contract. Lozi law is the law of Status. The separation of the Law of Persons and the Law of Things has no meaning. The major portion of the Law of Obligation is also mixed up with them as Barotse society is comparatively undifferentiated and its structure is uncomplicated.

The Lozi court following the conception of natural justice insists that both parties must always be given an opportunity of being heard. The distinction between direct and circumstantial evidence and between direct evidence and hearsay is maintained. There are no lawyers and judges to conduct the cross-examination of witnesses. Gluckman has shown that the current belief that African courts assume the defendent to be guilty is mistaken. The assumption of guilt is an aspect of the judge's cross-examination and is accentuated because during the cross-examination the judges give judgements on behaviour in relation to norms.

It is interesting to note that even the king and his councillors are under the law and must act by regular procedure. The king can be sued by his subjects in court ; to avoid embarrassment, he should act through councillors who thereby become personally liable and may not plead his orders in defence. The distribution between judicial, legislative and administrative powers is recognized by the Lozi even though all the three powers are exercised by the k u t a.

Professor Gluckman proves that primitive law is not quite different from modern law and shows the basic identity between the two. This is a great contribution in the field of jurisprudence and political science.

Sachchidananda

A Story of Indian Culture, *by Bahadur Mall. The V. V. Research Institute. 1956. Rs. 5.*

The Vishveshwaranand Vedic Research Institute has to its credit a number of publications on Indian history and culture, the most outstanding of which is the *Siddha Bharati* in two parts containing a number of very important papers on Indology written by well-known scholars of India and abroad. The present work by Bahadur Mall is a new addition to the publications of the Institute. The work under review is divided into five books, each containing a number of chapters dealing with the cultural attainments of India in different periods of her history.

The book begins with a description of the life of the people of the Vedic Age with particular emphasis on their religious thoughts and institutions. The next book relates the story of the reform movements of the Buddha and Mahavira. The author then tries to explain the process of the transformation of Vedic religion into Hinduism. In the concluding part of the book an attempt has been made to give a picture of the renaissance in Hinduism. The author claims to have given a comprehensive account of the political, social and religious life of the people of India. But unfortunately, he has depended mostly on materials derived from secondary sources. He has also largely relied on some authors whose opinions no longer stand the test of historical scrutiny. The author has also made some confusion in the presentation of ethnological and sociological data. Misrepresentation of facts and wrong interpre-

tations are also not lacking. The author's analysis of the data and the conclusions drawn are also far from being satisfactory and convincing. In spite of some such defects, the work as a whole is a presentable volume to the general public for its lucid recounting of the tale of Indian culture, and it is hoped that the general reader will be able to get some kind of a picture of the character and achievements of the Indian people.

S. R. Das

Santals of the Santal Parganas, *by P. C. Biswas, Pp. 230 with 9 plates. Bharatiya Adimjati Sevak Sangh, Delhi. 1956. Rs. 10.*

This book seems to be a monograph about the Santals of Santal Parganas and covers 230 pages including a bibliography of six pages. Besides two chapters, one on the historical aspect and the other on the physical features of the Santals, there are five other chapters (though the numbers do not tally with those mentioned in the contents) mainly dealing with their manners, customs and material life together with a chapter on the effect of their contact with the neighbouring Hindus and Christian missionaries.

Had this book been written by an amateur anthropologist we would not have taken any serious notice, and simply said that it is a hotch potch of information of a very general nature gathered mainly from different sources, to which has been added a few paragraphs based upon personal but superficial observation. But we are astonished to find that it has come from the pen of the Head of the Department of Anthropology, Delhi University. Out of its 230 pages, if we take out the quoted and unquoted passages, as well as passages slightly altered and taken mainly from the Bihar District Gazetteer, Santal Parganas, we are afraid the author's actual contribution hardly reaches 80 pages in all.

It will be sheer waste of time to discuss in detail this book. We shall only refer to some statements or remarks in order to justify what has been said above. The author claims that the book is based upon his own field-work carried out between the years 1931 and 1934; but when examples are required to substantiate his statements, he often quotes from other authors, taking it for granted that the Santals, irrespective of time and space, have been maintaining a somewhat fixed cultural pattern. As for example, we can point out that in one single chapter on Social Organization, in order to

illustrate the relation between parents and children, he has quoted E. G. Man (1867) and the *Amrita Bazar Patrika* (1933); regarding the traditions of the different 'septs' he quotes P. O. Bodding (1898), to describe 'Chacho Chhatiar' ceremony (a ceremony by which a Santal takes his place in his society), he quotes entirely L. S. S. O'Malley (1910); for describing a particular form of marriage he refers to Uma Chowdhury (1952). But these do not include passages taken from other sources and printed without quotation marks or with slight alterations. This remark becomes clear when we compare his description of different topics in this chapter with those in the District Gazetteer. Even before describing the b i t l a h a (outcasting) the author categorically says that 'one such outcasting I saw personally' (p. 95) : but the language of his description is remarkably similar to that of the District Gazetteer. Similar is the case with the description of the 'Disposal of the Dead' in the same chapter. Some of the author's remarks in this chapter clearly show that he is not aware of the progress made in Social Anthropology during the last few decades. Even the most ardent evolutionists of to-day will not try to reconstruct past marriage conditions simply on the basis of kinship terminology, as the author has done ; nor will they say with Dr. Biswas that, 'Linguistically Santals belong to what has been called the Austric group and thus would be westernmost peripheral representatives of what is the Hawaiian type of family in the Pacific' (p. 51). There are also many contradictory statements in this chapter, as for example, on p. 52, Dr. Biswas writes, 'Up to the time of their marriage the daughters are the property of their fathers or the nearest male relatives (if the father is dead,... ; when married, they come under control of the family of their husbands (with these as their immediate lords and masters)...'; but on page 57 he writes, 'Some writers have remarked that the Santal women are looked upon as mere chattel, with which opinion I disagree'. Again on p. 56, where relationship between a husband and his wife has been dealt we find, 'When they once settle down to life, it is generally for good'; but on p. 88, he writes, 'Divorce is a common sequel to Santal marriage...'. Further he has made a mess with the names and functions of the 'septs' and 'sub-septs' of Santals without dealing with them scientifically. A careful scrutiny will reveal that some the the contradictions and conflicts among the

author's statements are due mainly to careless observation, while others are due to compilation of information from different sources and brought under a common heading in the book.

One of the most unscientific chapters of this book is on 'Material Culture of the Santal'. In this chapter some of the material objects have been illustrated by line drawings printed unnecessarily on art paper. These figures do not bear any scale, nor are they proportionate representations of the original objects. As a result, arrows have become longer than the bow or the flute is much longer than the drum. Sometimes the figures do not tally with the accompanying descriptions, which are in some cases themselves inaccurate. It is annoying to read the description of the preparation of wine from m o h u a flower (wrongly mentioned as m o w a r fruit) on p. 41, as it becomes almost like reading a riddle ; or 'the Santal children play a game which is known as Hide and Seek' (p. 49), etc. As one of the many examples of unscientific and incomplete description we may point out the author's description of house types (pp. 16, 17), where he mentions two types of huts but describes one whose length and breadth are given, but not the height. Regarding the construction of such a hut he refers to posts and beams but not to the material or materials from which these are made, nor gives their dimensions ; further, he has failed to mention the distinction between a house and a room. Many articles of material life, such as, mortar and pestle, bow and arrow, sling, oil press, etc., have been described without mentioning their Santali names or giving their measurements. In this chapter, too, we find quotations from other authors, but hardly anything from his own observations. As regards the preparation of different varieties of cakes made from rice, he quotes nearly two pages from P. O. Bodding (pp. 36 and 37).

Excepting the chapter dealing with the physical features of Santals it is useless to discuss any more the other chapters of this book which will merely add more examples to our remarks. And on the whole they are provide less information than the District Gazetteer, which has mainly served as the author's source-book.

As Dr. Biswas is reputed as a physical anthropologist, naturally we are specially interested in the chapter where he has dealt with the physical features of the Santals based upon anthropometric data, including those of blood groups and dermatoglyphics. The

author has mentioned that excepting the data on blood groups the other data were collected by him, but he has not mentioned anywhere whether the 50 individuals whose hand-prints are the basis of his dermatoglyphic studies are included within the 100 individuals (according to the author they are 'specimens') who were subjected to anthropometric measurements. First of all, the author has followed an antiquated method in depicting the 'frequency distribution' tables of different characters, which do not serve any purpose excepting that it helps to cover more pages. The author has also covered a number of pages in showing the statistical correlations between a number of somatoscopic characters (whose justification is still a matter of controversy) but has failed to utilize them properly, and as a result those pages have become superfluous. Many terms used in this chapter, such as, 'actual measurements', 'greatest concentration of cephalic index', 'birds' eye view of the population' and 'monotonous straight' add to nothing but confusion. Further, in order to explain the ethnic position of the Santals, Dr. Biswas has used the terms 'Proto-Australoid', 'Dravidian', 'Alpine', 'Pamirian', 'Indian' and 'European' in such a free manner that one wonders as to what race the Santals actually belong to ! The most serious affair has however been the different percentages of finger prints given now by the author. The earlier figures of the author were published in *Man in India*, Vol. 32, No. 3, p. 134, 1952, by B. B. Verma, a student of the author. That Verma's figures were wrong was never pointed out by the author and Verma's figures have been quoted by some authorities (p. 123, Table XXXIX, *The Aboriginal Races of India* by S. S. Sarkar). The reviewer feels tempted to ask how such great discrepancies in figures can occur—38·8% for 50·47% ; 57·2% for 49·05% and 4·0% for 0·47%, as we find between the author's figures published on different dates (Verma, *ibid.* p. 138 quoting Biswas and Biswas : p. 200).

The editing of the book is thoroughly unsatisfactory. There are a number of irregularities, the same Santali words have been spelt differently in different chapters, and sometimes the Santali words appear in italics, sometimes within inverted commas and sometimes in capital letters. There are also a number of printing mistakes.

On the whole, we feel that by writing this book mainly on the socio-cultural aspects of a particular tribe, Dr. Biswas has trodden a path which is not his own ; the Bharatiya Adimijati Sevak

Sangh has been led to do a great disservice to the cause of Social Science in India by being induced to publish this book.

G. S. Ray

Chaulukyas of Gujarat, *by Asoke Kumar Majumdar. Pp. 545 with 10 full page illustrations and a map. Bharatiya Vidya Bhavan, Bombay, 1956.*

This excellent monograph is a history of the Chaulukya Dynasty which ruled Gujarat from 942 to 1304 A. D. It is basen mainly on the original works of Jain scholars like Hemchandra, Someswar, Merutunga, etc., supported by epigraphic records. It is thus a comprehensive survey of the history and culture of Gujarat from the middle of the 10th to the end of 13th century. The book is fully documented, with a wealth of information not only on the history and administration of Gujarat but also on the economic, religious and socio-cultural life of the people. Many would not, perhaps, agree with the conclusions of the author on some controversial points, but one need not have to agree with him on all points in order to appreciate the merit of the book. One also would have wished the map to contain more details so that one could follow the historical accounts with greater clearness. The book is undoubtedly a valuable contribution to our detailed knowledge of an important part of India just before the advent of Muslim rule. We can, therefore, recommend the book to students and scholars engaged in the detailed study of Indian history.

P. K. Mitra

Mundari Folktales, *by P. K. Mitra, Pp. V+168. Published by the Author from 12, Purulia Road, Ranchi. Rs. 5.*

This book contains 28 folk tales in the Mundari language in Devanagari script with English translation. These were collected by the author himself, who knows the language very well and came in close contact with the Mundas in his administrative capacity. In the Introduction, the author has shown that Mundari is a very primitive language, being a member of the primitive Austro-Asiatic family of languages, which are spread over a wide area from India to the south-west Pacific region. He has further shown how folklore is studied scientifically by scholars who try to reconstruct the cultural history and affinities of different peoples from their folklore.

Folktales of every country make delightful reading and this book, therefore, is a welcome addition to this class of literature. We think, the book will be found very useful to those who are learning the Mundari language and hope that it will find a place in the library of every person and institution concerned with tribal affair in India.

B. C. Roy